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The Geekiest Candidate

MASTER

The votes are in on the most dynamic presidential e-campaign. See whose it is.
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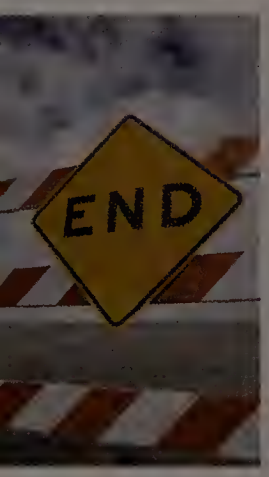

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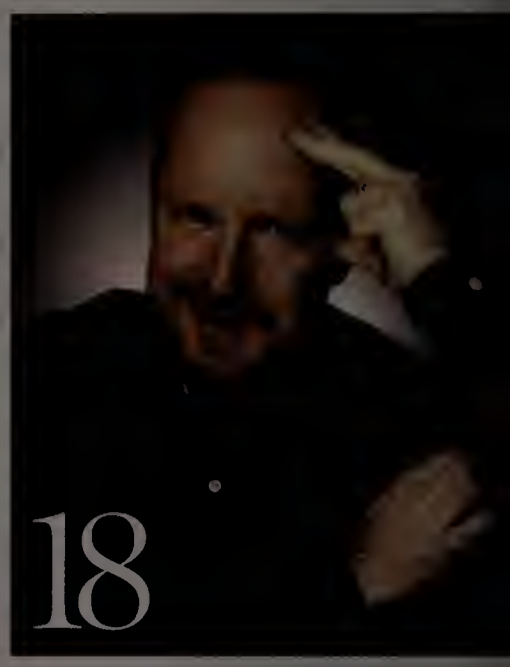

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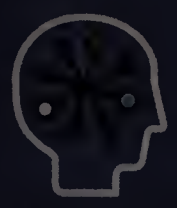

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■ EDITOR'S NOTE

Don Tennant

Common Sense

IN ORDER to make the point that Iran's illicit acquisition of AMD processors to build a supercomputer should not be allowed to fuel a blanket indictment of the Iranian IT community, I asserted in a column I wrote last month that the vast majority of Iranian technologists are no different from their U.S. counterparts. Was that a stretch?

Some readers thought so.

"I agree that it is most likely true that 'there are good people in Iran who are trying to use technology to improve people's lives,' and that to assume all Iranian technological progress is inherently dangerous is ignorant," one wrote. "However, I think Mr. Tennant's assumption that 'the vast majority of Iranian technology guys are like us, too' is equally ignorant, if not more so."

I, in turn, agree that assumptions are too often born of ignorance. But the fact is, this one was born of common sense.

I'll get to the explanation, but first, let me stress that no one should construe my defense of the Iranian IT community as a defense of the Iranian regime or ignorance of the atrocities that those in authority in Iran have been committing for decades. The religious persecution that has occurred in Iran, especially since the overthrow of the Pahlavi government in 1979, is one of the cruelest injustices of our time. Many of us have had the opportunity to get to know people whose families fled from that cruelty and resettled in the U.S., and we know firsthand that they tend to be people who are worthy of our admiration and respect.

Others of us don't make the effort, and look at anyone from Iran with a suspicious, accusatory eye.

One reader who wrote in response to Patrick Thibodeau's initial reporting on an Iranian research institute's success in obtaining Opteron processors despite the trade embargo identified himself as a former AMD employee. "It doesn't surprise me," he wrote. "When I worked at AMD in Austin, Texas, in the late '90s, half of my fellow co-workers were from Iran. In fact, there were so many Iranians working in AMD's Fab 10 that when I suited up for my shift, I felt like I was in another country." The inference is that those Iranians working in Austin were part of some elaborate international conspiracy that ultimately delivered the processors to their homeland. Come on.

■ The inference is that those Iranians working in Austin were part of some elaborate international conspiracy. Come on.

That's the same sort of nonsensical thought process that identifies the Iranian IT community with the offenses of those who are in power in Iran, and therefore as a body that's inherently different from the U.S. IT community. Iran is not the sum of the wrongdoings of the politicians and clerics who are in authority.

Iran is, according to CIA figures, a country that in 2006 had a GDP of nearly $600 billion. Clearly, it would have been even higher were it not for the state's control of so much of the country's economic activity and the inefficiencies that creates. Persecuting some of its best talent doesn't help, either. But none of that makes Iranian IT pros who work in the trenches of that economy different or unique. They're trying to solve the same sorts of problems you are. It's just that they have even more obstacles to contend with. Common sense.

Another reader who wrote in response to Thibodeau's reporting was Ali Parvini, founder of Minoo Software Solutions in Tehran. His comment, which I've edited for clarity, is enlightening.

"It is a fact that Iran can acquire anything listed in U.S. sanctions indirectly from other countries. And it is not odd in the modern world of communication and business moving forward to globalization," Parvini wrote. "I hope all these tools lead us to a better world with peace and harmony for everyone of any race, religion or country."

As it happens, Parvini is active in the Tehran/Iran chapter of the Association for Computing Machinery, a professional association to which many of our readers belong. To the extent that ACM members here concern themselves with working for a better world, he's just like them. ■

Don Tennant *is editorial director of* Computerworld *and* InfoWorld. *Contact him at don_tennant@computerworld.com, and visit his blog at* http://blogs.computerworld.com/tennant.

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Ethics: Just a Matter Of Right and Wrong

I have a fundamental problem with Don Tennant's assertion that the lack of ethics education in school curricula is to blame for illicit activity ["Just Plain Unethical," Editor's Note, Dec. 3]. Ethics are as simple as right and wrong. Is it Frank Abagnale's assertion that he was unable to determine right from wrong because the school system never taught him? This is a cop-out! Illicit activity is deliberate and not an act of omission. Humans have free will, and that very fact means they will take actions that are contrary to everything they have been taught or that society deems acceptable. Unless the likelihood of consequences for their actions outweighs the likelihood of reward, there is a segment of the population that will eternally make unethical decisions. People who commit crimes over the Internet do so because the likelihood of capture is far less than it is in the nonvirtual world. Having a botherder take three credit hours of ethics is a waste of everyone's time.
■ **Bill Moss,** *manager, IT policy and compliance, Cincinnati*

Do we really need a college course to tell people that it's wrong to steal? And if a person is leaning toward "easy money," do you really believe that a course on ethics is going to turn him around? People know right from wrong. Some people simply choose the latter.
■ **Phil Kriley,** *systems manager, Renfrew, Pa.*

Good grief, Don! Do you mean to say that because I was not required to take an ethics class, I was instead taught to pay lip service to ethics? That's like saying that because I was not required to take forestry classes, I was instead taught to cause forest fires. Would a class have kept Frank Abagnale from stealing? Most people can figure out what is ethical regardless of the presence of technology; many companies have codes of conduct that reinforce ethical values, as opposed to just keeping them one step ahead of the law. What disheartens me is the willingness of some people to equate what is ethical with what is legal. If that is your bent, then an ethics class is just going to help you walk closer to the line.
■ **Cathy Taddei,** *Portland, Ore.*

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Here's a look at the Hyper-V virtualization technology in Windows Server 2008. Find out how it works, what its major benefits are and when you can expect to deploy it.

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Columnist Mike Elgan supports protecting privacy, but he believes there are many situations where surveillance should be legalized, normalized or even required.

5 Things You'll Love About Firefox 3
Check out some nifty new tools that you can expect to see in Mozilla's next browser.

What to Do With Unwanted IT Gear
Did you get new high-tech gear for the holidays? Not sure what to do with the old stuff? We can help.

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Leaving personal information on cell phones and computers before you sell, donate or recycle them can expose you to identity theft. Here's how to protect yourself.

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News Digest

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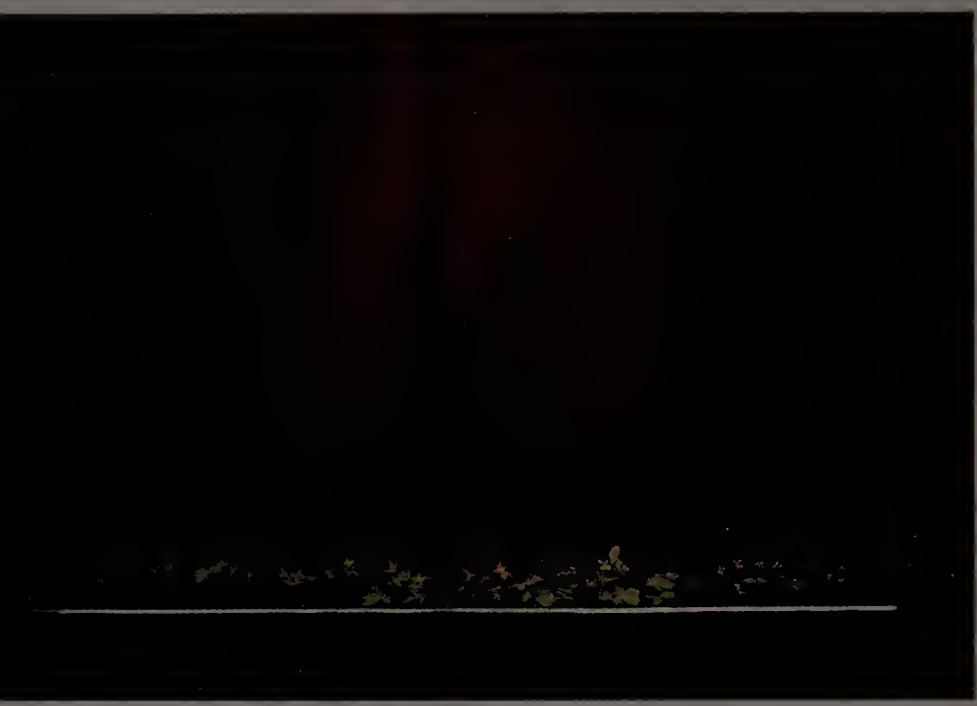
THE WEEK AHEAD

MONDAY: The 2008 International Consumer Electronics Show opens in Las Vegas, following a "preshow" keynote speech the night before by Microsoft Chairman Bill Gates.

TUESDAY: Microsoft plans to issue two security fixes for Windows as part of its monthly Patch Tuesday release. One of the patches has been rated "critical" by the company.

FRIDAY: Offshore outsourcing vendor Infosys Technologies is due to report its results for the quarter that ended Dec. 31.



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INTERNET APPLICATIONS

AOL Plans to Drop Curtain On Netscape's Browser

AOL LLC'S Netscape unit is discontinuing its Navigator Web browser and urging users of the pioneering and once-dominant software to switch to its Firefox cousin.

Ironically, the announcement of Navigator's demise came on the same day that Microsoft Corp. filed a memorandum in federal court related to its 2002 antitrust consent decree. In the filing, Microsoft cited the ongoing development of Netscape's browser and other products as a reason why most of the decree's key provisions should be allowed to expire on Jan. 31.

Netscape's loss of control of the browser market to Microsoft in the late 1990s was the focus of the U.S. government's antitrust case against the software giant. The prosecutors charged that Microsoft's bundling of Internet Explorer into Windows gave it an unfair advantage over Netscape and other browser rivals. Navigator also lost users to Firefox, the open-source browser developed by the Mozilla Foundation, which was set up by the former Netscape Communications before it was bought by AOL in 1998.

In November, Net Applications, a firm that measures Web metrics, tracked Netscape's share of browser usage at just 0.60%, compared with 77.4% for IE and 16% for Firefox. That was a far cry from Netscape's heyday, when it controlled more than 80% of the market.

In a Dec. 28 posting on AOL's Navigator blog, Tom Drapeau, director of the company's Netscape brand team, said the unit will stop issuing security updates for the browser as of Feb. 1.

"Given AOL's current business focus and the success the Mozilla Foundation has had in developing critically acclaimed products, we feel it's the right time to end development of Netscape-branded browsers [and] hand the reins fully to Mozilla," Drapeau wrote.

Navigator will remain available for download from an AOL Web site that has yet to be set up, but all support by AOL will cease.

"While internal groups within AOL have invested a great deal of time and energy in attempting to revive Navigator, these efforts have not been successful in gaining market share from Internet Explorer," Drapeau wrote. He noted that recent work on the browser "has been limited to a handful of engineers tasked with creating a skinned version of Firefox with a few extensions."

— Gregg Keizer

REGULATION

Bain Mum On Federal Probe of 3Com Deal

INVESTMENT FIRM Bain Capital LLC last week declined to comment on the likelihood that a federal panel will extend its review of a proposed buyout giving China-based Huawei Technologies Co. a 16.5% ownership stake in 3Com Corp.

Huawei's stake would 'gravely compromise' national security, says U.S. Rep. Thaddeus McCotter.

The Committee on Foreign Investment in the United States is evaluating whether Huawei's involvement in the $2.2 billion deal would pose national security risks.

CFIUS reviews usually last 30 days but can be extended by another 45 days. The panel likely will do so on the 3Com deal, the *Financial Times* reported last week.

Bain, which would own the rest of 3Com's stock, said in a statement that the review is a "confidential process" but that it expects CFIUS to approve the buyout.

– GRANT GROSS, IDG NEWS SERVICE

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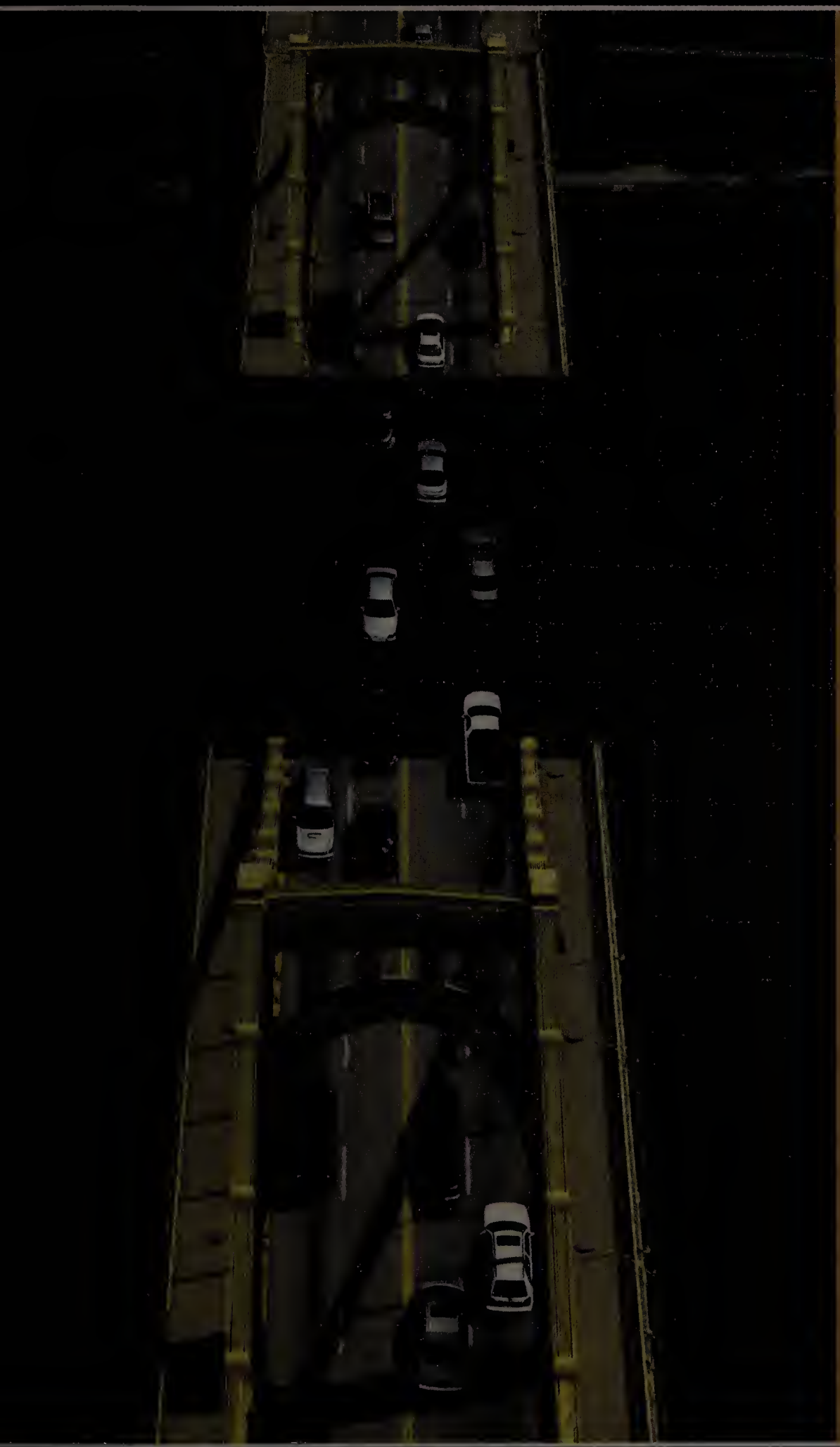

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PRIVACY

Every Click You Make . . . Sears and Kmart Could Be Watching You

CUSTOMERS taking part in a marketing program launched by the parent firm of Sears, Roebuck and Co. and Kmart Corp. may be unintentionally providing the retailers with significant personal information, according to antispyware researchers.

CAMPBELL LAIRD

Harvard Business School assistant professor Ben Edelman contended last week that the My SHC Community program falls short of Federal Trade Commission standards because it fails to tell users exactly how its tracking software gathers the personal data of some users of the social network.

"The software is not something you'd want on your computer or the computer of anyone you care about," Edelman said in an interview. "It tracks every site you go to, every search you make, every product you buy, and every product you look at but don't buy. It's just spooky."

Edelman's criticism comes about a month after CA Inc. senior engineer Benjamin Googins described the software in a blog post as "a significant threat to privacy." He said that it monitors all of a user's Web traffic, keeps track of secure sessions such as visits to bank sites, and sniffs through e-mail headers. All of the gathered data is sent to Internet measurement firm comScore Inc., whose VoiceFive Networks Inc. subsidiary wrote the software.

Sears Holdings Corp., parent firm of both retailers, launched the social network in March.

"It's still kind of in its early days," said Rob Harles, vice president of My SHC Community. "It's mainly used right now for research, but we want to open it up [to create] dialogue with our customers."

He noted that members have the option of installing the tracking software and that less than 10% of members are using it. He did not disclose the total number of community members.

He also contended in an e-mail that "we have thoroughly vetted this process to ensure that it follows accepted legal guidelines."

— Robert McMillan, IDG News Service

Short Takes

About 90 residents of Endicott, N.Y., sued IBM, alleging that the company's manufacturing operations there caused environmental contamination for decades. IBM, which built computers and circuit boards at the facilities until 2002, said it has already addressed the problems.

EMC Corp. has agreed to buy Document Sciences Corp., a maker of software that can automate the creation and delivery of personalized communication such as brochures, for $85 million.

Intel Corp. resigned from the One Laptop Per Child project's board of directors after refusing OLPC's request that it abandon its Classmate PC program. Intel's low-cost Classmate PC competes against OLPC's XO laptop, which uses processors from Advanced Micro Devices Inc.

Network Appliance Inc. agreed to buy Onaro Inc., a Boston-based maker of storage management software, for an undisclosed sum. The deal is set to close this quarter.

SOFTWARE

Software Glitch Mars Seattle's New Year's Fireworks Show

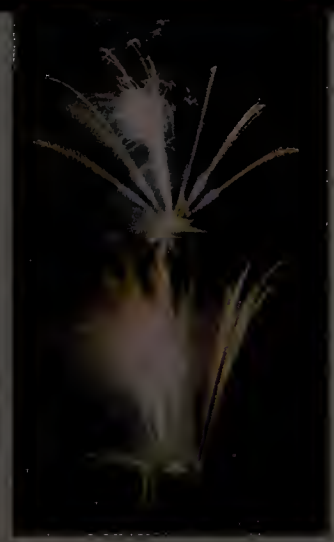
SOFTWARE PROBLEMS can even wreak havoc with fireworks shows, as New Year's Eve revelers in Seattle learned.

A corrupted computer file forced the operators of a midnight fireworks display at the city's Space Needle tower to launch most of the projectiles manually, resulting in a show that was three minutes longer than planned and not in sync with its accompanying music.

Fireworks crews have been using pyrotechnics software running on PCs for more than two decades, said Dorothy Drewes, co-editor at American Fireworks News, which publishes newsletters, books and videos about fireworks.

The software used now is "very graphical," Drewes said, comparing it to video-editing tools such as Adobe Premiere. The graphical nature of the programs enables users to design and simulate complex shows that can be timed precisely with music.

That kind of timing is more difficult when fireworks have to be set off by hand, Drewes added.


Most of Seattle's fireworks had to be launched manually.

"It's very seldom today that you fire manually," she said.

The Seattle show was produced by Pyro Spectaculars Inc. A call to the company's Rialto, Calif., headquarters seeking comment about the glitch wasn't returned.

– ERIC LAI

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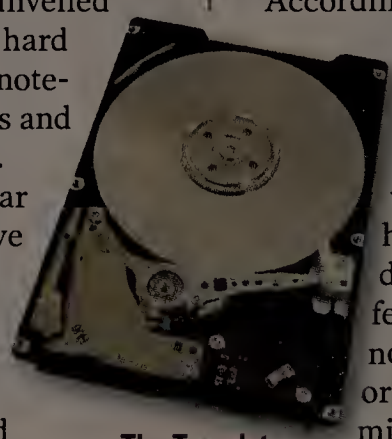
HARDWARE

Hitachi Unveils 500GB Notebook Disk Drive

HOPING TO ADDRESS increasing user demands for storage capacity, Hitachi Global Storage Technologies last week unveiled a pair of 2.5-in. hard disk drives for notebook computers and mobile devices.

The Travelstar 5K500 disk drive will be available in February in 400GB and 500GB versions, priced at about $350 and $450, respectively.



The Travelstar 5K500 disk drive

Both versions incorporate three-spinning-disk configurations and perpendicular magnetic recording technology, the company said.

A third version of the Travelstar 5K500 includes a bulk data-encryption security option with a 1.5Gbit/sec. Serial ATA interface, according to the company.

IDC analyst Richard Shim said the new half-terabyte 2.5-in. drives may help suppliers keep up with growing demand for storage capacity — at least in the short term.

"We are starting to approach that threshold where we're pushing the outer limits of how much capacity we really need," he said. "If you ask anybody, they never say they have enough storage."

Shim said Hitachi's three-disk, 2.5-in. drive configuration shouldn't create greater heat output or performance problems than traditional 2.5-in. two-disk models.

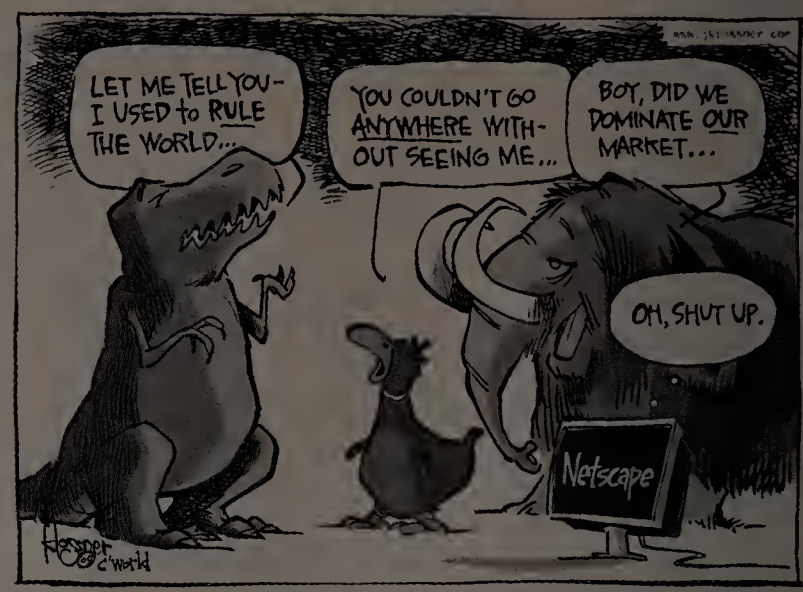
However, he cautioned that over the long run, continued efforts to significantly increase drive capacity and the number of spinning disks on a device will likely cause data management and hardware maintenance problems for users.

According to Hitachi, the Travelstar 5K500 drives can hold up to 125 hours of high-definition video, 500 hours of standard digital video, 178 feature-length non-HD movies or 125,000 four-minute songs.

The 12.5mm storage device can operate at speeds of up to 5,400 rpm and includes rotational vibration safeguards and a 3Gbit/sec. SATA interface.

— Brian Fonseca

BETWEEN THE LINES *By John Klossner*



IBM is realigning its hardware units around four customer categories – enterprise users, small businesses, vertical industries and chip buyers – instead of its current product-line setup.

Vonage Holdings Corp. said it and Nortel Networks Corp. plan to cross-license several patents to settle a dispute related to voice-over-IP technology. The settlement is the fourth reached by Vonage since October.

TWO YEARS AGO: Verizon Communications Inc. completed its acquisition of rival MCI Inc. for $8.5 billion in cash and stock.

Global Dispatches

U.K. to Strengthen Breach Penalties

LONDON – The U.K. House of Commons Justice Committee is calling for tougher penalties for data security breaches.

In a report issued last week, the committee also recommended that the U.K. Information Commissioner's office gain new enforcement powers.

The committee's report comes after several recent data breaches. In November, two CDs holding data on 25 million people were lost in transit between the HM Revenue & Customs facility and the National Audit Office.

The committee also called for new reporting requirements that would force companies to report losses of data, and for new laws that would make reckless or repeated security breaches a criminal offense.

"There is evidence of a widespread problem within government relating to establishing systems for data protection and operating them adequately," the report said.

Tash Shifrin,
Computerworld U.K.

Nokia Siemens Purchasing Apertio

ESPOO, FINLAND – Nokia Siemens Networks last week agreed to buy Apertio Ltd., a maker of network management applications for telecommunications operators, for €140 million ($206 million U.S.).

The deal is expected to close in May.

Nokia Siemens Networks said that Apertio will become part of its Converged Core business unit and will be led by Apertio CEO Paul Magelli.

Bristol, England-based Apertio develops software that allows mobile phone operators to authenticate and deliver applications to users, shut off lost handsets and collect real-time data on subscribers.

Jeremy Kirk,
IDG News Service

BRIEFLY NOTED

IBM last week acquired XIV, a Tel Aviv-based maker of storage-area network equipment. IBM said it expects to use XIV's flagship product, Nextra, to address growing needs for high-performance storage for digital archives, digital media and Web 2.0 applications.

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App Support Limitations Could Impede Virtualization

A lack of support commitments on the part of application vendors may stall the spread of virtual servers. **By Eric Lai and Patrick Thibodeau**

GETTY IMAGES

SERVER virtualization feels unstoppable these days, with market research firm IDC predicting that worldwide sales of virtualization software will grow at an average annual rate of 27% through 2011.

But several factors could stall the technology's advance, according to analysts. For instance, software licensing terms often are too restrictive or expensive for users that want to run databases and applications on virtualized servers. In addition, finding IT workers who have virtualization experience can be a challenge.

Another possible roadblock that has started to loom larger is the dearth of formal support for virtualization by application vendors. That can result in "a lot of finger-pointing" if the virtualization, operating system and application vendors aren't willing to step up and fix problems, said Forrester Research Inc. analyst Christopher Voce.

Joel Sweatte, director of IT at East Carolina University's College of Technology and Computer Science in Greenville, N.C., said that almost all of the specialized research and education applications he manages aren't "overtly supported" in virtualized environments.

For instance, Sweatte recently asked the vendor of an engineering analysis application about its support for VMware Inc.'s virtualization software. The company told him that it didn't have a virtualization support policy and that he should call back if the application didn't work. "That's sort of emblematic of my experience," he said.

Sweatte added that he thinks vendors will need to be more prepared for the support question in the future. "Our goal is to put everything in virtual environments," he said.

Market leader VMware claims that more than 100 software companies support their applications on its virtualization platform. But Parag Patel, VMware's vice president of alliances, acknowledged that many independent software vendors are lagging in support. "The problem is that ISVs didn't expect virtualization to take off the way it has in the past two years," Patel said.

In addition, vendors like Microsoft Corp. and Oracle Corp. want to steer users of their applications and databases toward their own virtualization tools.

Microsoft doesn't formally support products such as Office and SQL Server on virtualization systems other than its own. In a policy posted on its Web site, Microsoft says it "will use commercially reasonable efforts" to investigate problems reported by customers that have Premier-level support contracts but use rival virtualization packages.

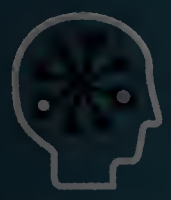
It also has signed joint support deals with some virtualization vendors. But the company says that in both cases, it may require technical issues to be reproduced independently of the virtualization software before it will fully support users.

Oracle, which launched a virtualization platform in November, has the same kind of support policy for its databases and applications.

In the case of VMware's ESX Server, Oracle said it "will only provide support for issues that either are known to occur on the native OS without virtualization, or can be demonstrated not to be [occurring] as a result of running VMware."

To encourage the certification of applications, VMware is making "special investments" with some software partners, Patel said. For instance, it set up a team at SAP AG's headquarters in Germany to help the business applications vendor certify its products.

But VMware and other virtualization vendors think the application support issue is being overblown. Software suppliers such as SAP "are giving us the solid green light," Patel said. "Companies like Oracle are giving us more of a yellow light. As the months progress, I think Oracle will become more of a minority." ■



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E-discovery Rules Still Causing IT Headaches

Many say the new archiving guidelines fail to account for evolving technologies.

By Brian Fonseca

GETTY IMAGES

MANY IT shops have spent months working to refit corporate systems so they comply with year-old changes to the Federal Rules of Civil Procedure, even as some executives say the revisions aren't clearly defined.

However, some IT executives who complained about the rules did acknowledge that the FRCP modifications have forced them to make positive changes to corporate data-retention policies.

The revisions, which took effect on Dec. 1, 2006, require that opposing sides in a federal lawsuit meet within 99 days of its filing to determine what electronic data must be produced and in what format. Failure to comply could lead to fines or a prison sentence.

The e-discovery rules have been created and are enforced by the U.S. Supreme Court and are often followed in state courts as well.

IT staffers at Webcor Builders Inc. have been struggling to understand the ambiguous rules while simultaneously working to determine where all relevant data resides and how it can be accessed quickly in case of litigation.

Gregg Davis, CIO at the San Mateo, Calif.-based construction firm, contended that the rules fail to take into account evolving storage technologies.

"The new rules require that electronic data be in its native format," he said. "This is easy to achieve when it comes to e-mail, which was the provision's main target. But it gets very murky when it comes to propriety databases and homegrown applications.

"There are still a lot of questions around what is digital storage and e-discovery," Davis added. "The [revised] rules have changed the game, and we are [being forced to] think and rethink where things are stored."

For example, he noted that Webcor still isn't sure whether images and documents on copy machine hard drives and print servers fall under the revised guidelines.

The latest revisions prompted Webcor to re-evaluate its overall data-retention policies and schedule quarterly meetings of executives from its IT and legal operations to discuss FRCP issues, Davis said. The company also tweaked its Symantec Enterprise Vault archiving tool to make sure data is available when it's needed.

Davis recounted some questionable demands from opposing attorneys in some recent litigation in state court. One of them asked that Webcor buy his client software that could help it read the contractor's Oracle database. Fulfilling such a request could prove "very costly," said Davis, adding, "This is why [FRCP] is a new slippery slope."

Laura Dubois, an analyst at IDC, said the FRCP changes are forcing companies to significantly increase spending on backup applications. The research firm predicts that e-mail archiving application sales will grow from $631 million in 2007 to $1.37 billion in 2011, she noted.

The updated FRCP rules have already placed a heavy burden on IT staffers, said Howard Nirken, a partner at Austin law firm DuBois, Bryant & Campbell LLP.

"[FRCP] has made their lives incredibly complicat-

"There are still a lot of questions around what is digital storage and e-discovery. The [revised] rules have changed the game, and we are [forced to] think and rethink where things are stored."

GREGG DAVIS, CIO, WEBCOR BUILDERS INC.

ed," Nirken said. IT is now responsible for immediately locating electronic files that "can exist just about anywhere — in networks, in people's personal computers [or] on any electronic media you can imagine."

Nirken, whose firm uses MessageOne Inc.'s hosted e-discovery system, said IT managers must make sure that such technology can freeze documents in e-mail in-boxes and instantly search for and locate needed data.

SILVER LINING

The rush to comply with the updated rules has provided some businesses with unexpected benefits by forcing action, IT managers say.

Bill Shaw, MIS director of The Village of Niles, Ill., said the revised rules led city officials to decree that all e-mails to and from city offices are official documents and subject to legal review.

That policy change quickly eased the city's e-mail storage and management burden by reducing the number of nonbusiness e-mails that pass through its systems, Shaw said. "It's had a reduction in our e-mail and an increase in productivity," he noted.

The Village of Niles uses a messaging appliance called Plug n Comply from Jatheon Technologies Inc., and Shaw checks it monthly to identify non-work-related messages and other inappropriate e-mail.

The city decided to deploy Toronto-based Jatheon's appliance in early 2007 after state officials began requiring that all e-mail communication be available when needed as evidence in court cases.

The city, which employs some 250 full-time workers and about 5,500 part-timers, processes e-mail through a single Microsoft Exchange server, Shaw said.

The Brink's Co., a Richmond, Va.-based firm whose holdings include Brink's Inc. and Brink's Home Security, hopes the revised FRCP guidelines clarify which data needs to be retained for long periods and which data can be deleted, said Suzanne Barasch, manager of corporate information systems and global messaging.

The company currently purchases 20 800GB backup tapes monthly to save all of its corporate data, she said.

"I'm not able to overwrite any of my tapes, and I haven't been able to do that for three years. [Our lawyers] don't want to overwrite any data," Barasch said. "I think there comes a point where keeping everything is silly. There are files that haven't been touched in years."

Brink's will begin installing IBM's DB2 CommonStore for Lotus Domino and eMail Search for CommonStore this month to smooth what can be a crippling archiving process, Barasch said. "If someone were to come to me and say, 'Provide this [electronic evidence],' it would cause me a lot of heartache now because of how things have been stored," she noted.

Rick Chin, senior vice president of IT at Pinnacle Financial Corp. in Orlando, said his company got a head start on changing its e-discovery processes after learning about looming FRCP changes at an industry conference months before the rules took effect.

The revised rules prompted Pinnacle to buy Mimosa Systems Inc.'s NearPoint e-discovery and mail archiving software in 2006 for use with its two Microsoft Exchange servers.

Chin considers himself fortunate to have learned about the revised rules long before they needed to be implemented.

"A lot of stuff that happened last Dec. 1 caught a lot of people off guard and [led] to scrambling and [confusion over] what to do," he said. "From [listening to] my peers, it's been a drain on them to add enough storage to do e-mail archiving or modify their processes." ■

Hosted Systems Easing E-discovery for Some

SOME BUSINESSES are turning to hosted systems in their efforts to comply with the revised Federal Rules of Civil Procedure, arguing that the software-as-a-service approach minimizes required IT infrastructure changes.

Adam Couture, an analyst at Gartner Inc., said that some users like the managed services model because they can place the data retention onus on someone else.

The revised rules require that organizations provide data on demand to opposing counsel in federal and some state courts.

"The chain of custody is very important to [companies]," Couture said. "If they can show [a court] that 'we had no way of getting to and tampering with those e-mails because it was at a service provider location,' that's a big relief."

The Leukemia & Lymphoma Society in White Plains, N.Y., turned to a hosted e-discovery system after finding that e-mail attachments and personal folders in Microsoft Outlook took up 70% of the group's e-mail storage capacity, said Claude Edkins, vice president of technology infrastructure.

The organization annually sends and receives 12 million e-mail messages, each of which must be saved, he noted.

Searching through the data to quickly fulfill legal requests could prove impossible. "We could never do that in a reasonable time to restore it," Edkins said. "It's cheaper to do it this way than to build an infrastructure up to restore that information."

The Leukemia & Lymphoma Society began using Fortiva Inc.'s hosted service in November, Edkins said. By June, he expects that all personal Outlook folders will be placed in a separate archive hosted by Stamford, Conn.-based Fortiva.

Using a hosted model for e-discovery has suitably "shifted risk" of any litigation he may encounter, Edkins noted.

"I don't want to be part of an organization that can't respond to a court order subpoena for documents," he explained. "I want to provide that information with credibility and viability without having to call in the National Guard."

– BRIAN FONSECA

"[Policy changes have led to] a reduction in our e-mail and an increase in productivity, because e-mail is being used for business and not other purposes.

BILL SHAW, MIS DIRECTOR, THE VILLAGE OF NILES, ILL.

On the Mark

HOT TRENDS ■ NEW PRODUCT NEWS ■ INDUSTRY BUZZ BY MARK HALL

MATTHEW FAULKNER

Automate Best Practices

WHEN YOUR IT vendor's product goes kablooey in your data center, you contact the company's support team and with a calm, Hannibal Lecter-like voice, you threaten to cook them with fava beans if they don't fix your problem immediately. Sometimes that works. But, asks Gil Levonai, vice president of marketing and strategy at NextNine Ltd. in Tel Aviv, wouldn't it be better if the vendor had tools in place that could automatically fix problems before you went cannibalistic? That's what he claims NextNine's Virtual Support Engineer (VSE) can do. He says the VSE software — part of the NextNine Service Automation 4 offering — can be downloaded or installed at your site. It uses a variety of protocols to access files, run commands and queries, and scan logs. It can actively fix, patch and update systems. "The VSE does what a support engineer would do in a help situation," Levonai says. By the end of 2008, NextNine will allow channel partners, and not just the vendor itself, to provide scripts. NextNine sells its wares directly to vendors as a reseller, so you'll need to pressure your IT suppliers to include VSE in their offerings. Do your best Hannibal Lecter imitation when you call.

Scripting best practices leads to less downtime, argues Levonai.

Convergence Coming

Fixed/mobile convergence seems inevitable. A Google search on the term delivers more than 670,000 hits. FMC technology was prominently featured in *Computerworld.com*'s recent story "13 Future Mobile Technologies That Will Change Your Life." And New York-based market research firm Heavy Reading says 60% of telecommunications providers expect most businesses to have shifted to FMC by 2012. But even inevitability has its challenges, suggests Kim Ganote, director of product development at Sprint Nextel Corp. She says you need an IP-based technology that can handle multiple media, because mobile devices will increasingly transmit video as well as voice and data. Ganote claims that the Sprint Wireless Integration service is media-agnostic. It also benefits mobile users by giving mobile handsets a raft of PBX-controlled features, such as integrated voice mail, call forwarding, abbreviated dialing and a command set that mimics a desk phone. Still, Ganote says that IT departments may have to work with their PBX suppliers to transfer desk phones' soft-key functions to mobile units, and there could be interface pitfalls because of differences in keypads from device to device. Certainly, the road to FMC will not be without a pothole or two.

20M
The number of fixed-line phones disconnected in the U.S. between 2001 and 2006, according to The Insight Research Corp.

Ribbiting Conversations

Ted Griggs, CEO of Ribbit Corp. in Mountain View, Calif., calls his start-up "Silicon Valley's first phone company." He claims that Ribbit Smart Switch software, which Alcatel-Lucent has certified for use in its networks, can connect to telephone networks and work with advanced protocols like SIP. The product also handles operations such as billing. And, like carrier switches, it runs around the clock. So, what makes this a Silicon Valley technology? Griggs answers: "We ripped open the walled garden a carrier would put before the switch." That is, the Ribbit Smart Switch has open application programming interfaces so developers can, for example, integrate a phone dialer into a CRM package, combining call records with other customer data automatically. Ribbit officially launched last month; Ribbit for Salesforce will ship next month. Monthly pricing runs about $25 per seat. ■

No. 3
Alcatel-Lucent's place in the global IP contact center market in 2006, per Infonetics Research.

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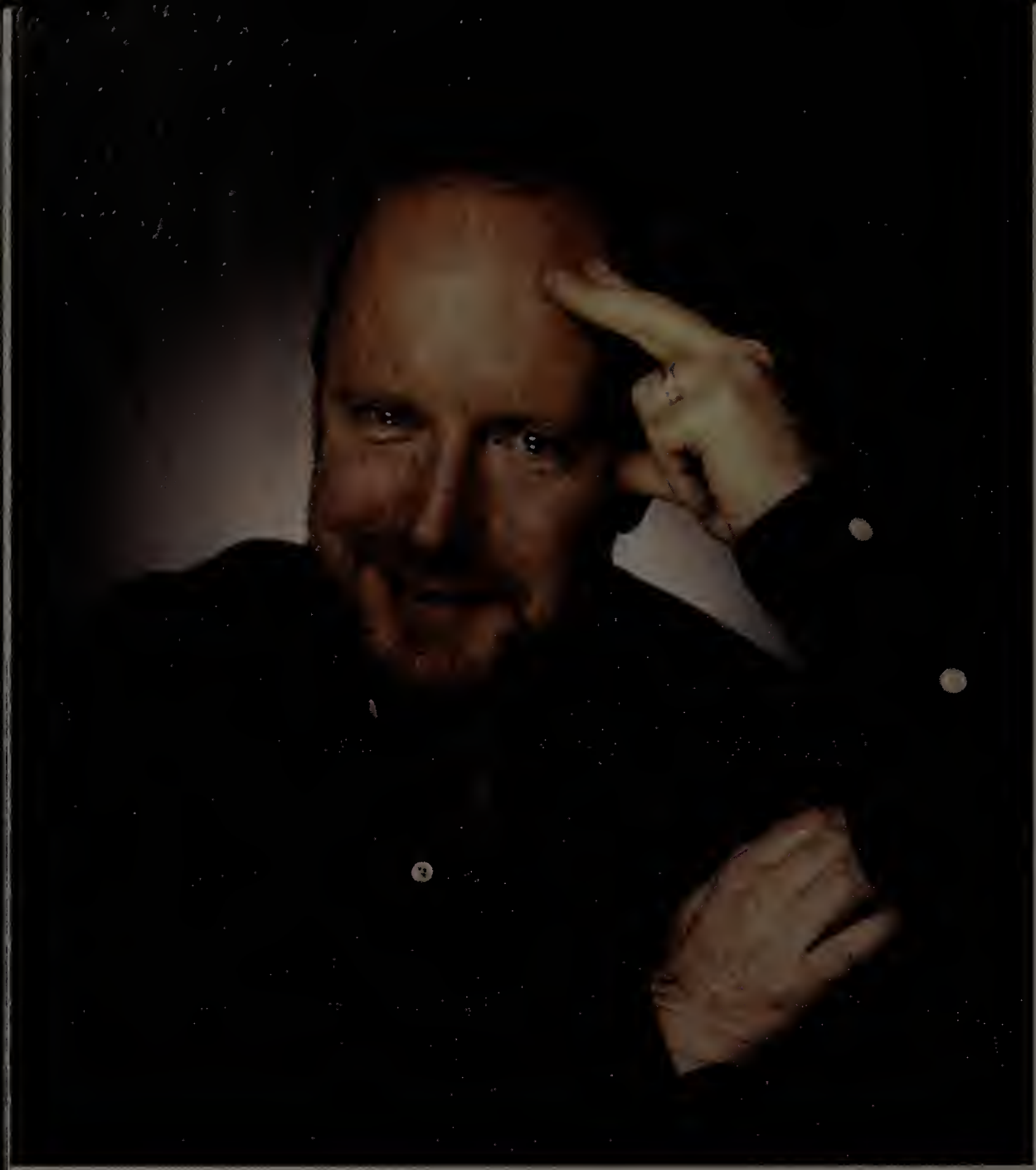

■ THE GRILL

John Hagel

Deloitte's IT strategy guru talks about **'innovation blowback,'** the **real point of outsourcing** and **the end of IT** as we know it.

John Hagel has written about "innovation blowback" — the unexpected consequences of investment in emerging markets — as well as other phenomena at the intersection of technology and strategy. His books include Net Worth, Out of the Box *and* Net Gain.

What is innovation blowback? Most large Western companies have understood the importance of emerging markets and the importance of really innovating for those markets. But that misses a much larger opportunity, which is to not just view them as isolated markets but as seedbeds for innovation that can be used to attack more entrenched positions in more developed countries.

For example, in China, vendors are able to offer handset devices on whatever networks are available, unlike in the U.S., where you need to get your device approved and supported by at least one of the major network service providers. But China is a much more open market, so there's a tremendous amount of innovation in handset devices, which could find its way into the U.S. So business line and IT managers should keep an eye on these developments and start to think more aggressively about using them as testbeds to develop products that can then address a much wider global market.

What's coming in "green" IT? There is growing recognition that IT devices consume an enormous amount of power. Technology vendors are beginning to make claims about their products' efficiency and power consumption, and yet there is no independent third party to certify these claims. But we will see the emergence of [such] bodies, and it will be a huge help to buyers.

What should IT managers do about the new social networking and collaboration tools invading the enterprise? We are seeing social media tools bleeding into the enterprise from the bottom up. These include wikis, document-

Continued on page 20

Dossier

Name: John Hagel

Title: Co-chairman, Center for Strategy and Technology

Organization: Deloitte & Touche USA LLP

Location: San Jose

Favorite technology: TiVo

Technology pet peeve: "We still don't have any digital technology as flexible and convenient as pen and paper."

In high school, he was: "A political activist."

Favorite nonwork pastime: Rockabilly and surf music concerts

Philosophy in a nutshell: "Find and pursue your passions. There's plenty of time to sleep later."

Last book read: *The Black Swan: The Impact of the Highly Improbable*, by Nassim Nicholas Taleb

Favorite movie: *American Graffiti*

Something people don't know about him: "I have translated medieval Arabic poetry."

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"In many cases, the IT department is playing the same role that the corporate counsel plays: that of risk-watcher.

Continued from page 18

sharing tools, instant messaging and so on, and they are generally not sponsored by central IT. The early adopters tend to be project teams, particularly if the teams are geographically distributed.

But don't IT managers have good reason to resist the intrusion of these tools? They have valid concerns, but there is a lot of value in doing some experimentation to understand what the limitations and risks are and to use project teams as experimental testbeds.

Another opportunity that could have a big financial impact [is] for exception handling. In automated business processes, exceptions need to be handled by people — in extremely inefficient ways. For example, a customer has a nonstandard shipping need. Often, these exceptions need to get a number of people involved. Who needs to be involved? Where are they? How do I reach them? Social networking tools, like a wiki, could be very helpful to resolve these issues.

What do you mean when you speak of the "consumerization" of the tech industry? The old paradigm is reversed. A technology comes to the consumer space before it gets to the enterprise.

But again, don't IT managers resist that kind of thing? Yes, and that points to another shift we see, which is the increasing importance of business line managers as decision-makers about IT adoption. In many cases, the IT department is playing the same role that the corporate counsel plays: that of risk-watcher. [But] the business line managers are under extraordinary pressure for near-term performance, and they are saying, "I understand there are risks here, but I need this technology, and I'm going to put it in."

Might this shift of IT decision-making to non-IT managers signal the disappearance of the IT department entirely? Certainly, there are trends that will transform the IT department significantly. One is the trend toward outsourcing and utility computing. And as we move to much more modular, loosely coupled technology, it becomes feasible to pull apart significant parts of the technology and embed them in the business line functions.

But I want to caution against the disappearance of the IT department. There is still a huge role to be played in terms of evolving architectures to more effectively use technology. There is a healthy tension to be maintained between point implementations of technology to get near-term business impact and a perspective that says, How does this play over time, and are we getting huge inefficiencies if we don't pay attention to the architecture?

What trends do you see in outsourcing and offshoring? Offshoring is often seen as wage arbitrage, getting access to lower-wage employees. In many cases, quality suffers. But the real opportunity is in accessing world-class skills, even if at a slightly higher cost.

If you think of it as skills arbitrage, you need to [outsource] to multiple providers, because it is rare to find one provider with world-class skills in a full spectrum of activities.

What will be the next hot thing in IT architectures? We've evolved our architectures from the centralized glass house out to the desktop and, somewhat tentatively, out to connect to business partners. But what if you started with a clean sheet of paper and said, "I need an architecture to connect to 10,000 business partners, and I don't have the market power to enforce IT standards on all these partners"? What kind of architecture would I develop? There is a whole set of policies and management practices required.

[Service-oriented architectures] have tended to follow the traditional pattern from inside out, from a fine-grained transaction level. But increasingly, the challenge has been to maintain long-term relationships with distributed players and not just think about it at the transaction level. The IT architectures required to support relationships are quite different from those designed primarily to efficiently execute fine-grained transactions.

Do you see anything interesting coming in hardware in 2008? There has been a process that I see becoming more prominent, which is the componentization of hardware — breaking down complex systems into much more commoditylike components. So rather than very complex servers, the trend in a lot of data centers is to very modest, low-cost commodity servers brought together in massive quantities to deliver huge computing power. Companies like Google have been at the leading edge, creating data centers with extraordinarily simple components to deliver extraordinarily complex functionality. There are real advantages in terms of flexibility and cost savings.

— *Interview by* **Gary Anthes**

■ OPINION

Michael H. Hugos

Calling on IT to Do the Impossible

HERE'S A CHALLENGE FOR YOU: Balance multi-year infrastructure development work with short, 30-to-90-day projects that deliver business application systems as business needs evolve. And do it so that even as you're implementing the IT infrastructure, you're delivering new applications that use this infrastructure.

You might think that you might as well try to change the tires on a race car while it's still moving. How can you build systems that use a new IT infrastructure until that infrastructure is in place? It's the role of the systems architect to answer that question, and the answer is one of the most strategic things that an IT group can provide for the business it supports.

It is clear at this point in the relationship between IT and business that we cannot keep refusing to deliver any new applications until we have installed all the new infrastructure and removed all traces of the old. That used to work: If we told business people to make do with what they had for a few years while we worked on installing and testing new IT infrastructure, they'd shrug and accept our decree, however grudgingly.

Those days are over. The world moves too fast and too unpredictably; a company's whole business model can change in the 18 to 36 months it takes to complete a big infrastructure upgrade project.

The key to the systems architect's seemingly impossible feat is to use iterative system-development techniques under the guidance of the enterprise architecture standards that have been defined for your company. Combine selected infrastructure components as needed with small chunks of custom code to create new systems. In this way, systems can be delivered and enhanced quickly. What keeps them from becoming an unmaintainable mess is that the systems are all created from the same set of components. That means that the IT groups trained in using this enterprise architecture can maintain and enhance any system built from those components.

■ The idea that companies can stand around while IT spends years perfecting the infrastructure is a quaint notion from the last century.

A good systems architect also understands that, when done right, these short application-development projects actually drive much of the longer-term rollout of the new IT infrastructure. Most infrastructure components — whether servers, operating systems, databases, middleware, Web portals, SOA tools, packaged software or programming languages — can be rolled out in phases that build upon one another.

If a new application system requires the functionality provided by a database, a Web portal and some middleware all hosted on certain kinds of servers running a given operating system, then installation of those components occurs as needed to support that new system. It is not necessary to install these new components throughout the entire company all at once.

Over the course of years, the strategic systems architect will coordinate the expanded installation and use of these components to support the new systems that use them. The migration from the old IT infrastructure to the new one is managed and timed to best support actual business needs.

The idea that companies can carry on as usual while IT groups spend years trying to create a perfect enterprise IT platform before any new systems are built is a quaint notion from the last century. The real-time global economy of the 21st century demands that an effective systems architecture be dynamic, not static. Yes, it is a bit like living in a house while you build it, but that is what a good systems architect is able to do. ■

Michael H. Hugos *is a principal at the Center for Systems Innovation and a speaker. A member of the 2006* Computerworld *Premier 100 IT Leader class, his newest book is* The Greatest Innovation Since the Assembly Line *(Meghan-Kiffer Press, 2007). He can be reached at* www.MichaelHugos.com.

The Geekiest C

Other presidential hopefuls may be fu
but **Ron Paul** has the standout e-campa

Candidate

ther ahead in the polls, gn. BY THOMAS HOFFMAN

POP QUIZ: Who is the first presidential candidate ever to be interviewed by a college student in his dorm room, with the video posted on YouTube?

The answer is Republican longshot Ron Paul, who is waging one of the most dynamic but least managed e-campaigns in the 2008 race.

The Texas Congressman's online fundraising efforts are as unconventional as his use of media. Unlike other presidential wannabes, who rely on e-mail blasts to would-be supporters, Paul has been building his war chest by allowing his backers to drive much of the campaign themselves.

The Paul campaign has taken a bottom-up, community-oriented approach to online fundraising so that "as donations come in, the information about who's donating is made available to everybody" on the campaign's home page, says Andrew Rasiej, co-founder of TechPresident.com, a New York-based blog that covers how the 2008 presidential candidates are using the Web and how content generated by voters is affecting the campaign.

And it's not just about fundraising. On Meetup.com, a site that facilitates grass-roots alliances of all kinds, Paul has the most "meetup" groups — real-world get-togethers of people who share common interests and find one another through the site — of any candidate, with 1,355. Former Arkansas Gov. Mike Huckabee appears to be in second place, with 261.

Other presidential campaigns are using the Web to build community and gain support. Former North Carolina Sen. John Edwards uses Twitter, an instant messaging/social networking service that brings a real-time feel to his campaign. The campaign of Sen. John McCain (R-Ariz.) has created its own online community called McCainSpace, where supporters can build Web pages and blog and e-mail friends or other potential supporters.

Sen. Barack Obama's (D-Ill.) Web page also invites voters to create their own blogs on the site. And the campaign has embraced the Facebook culture. "A lot of [Obama] supporters are connecting on Facebook and MySpace, so the campaign has created tools to update information on the Facebook platform," says Rasiej.

BOTTOM UP

But Paul's campaign has taken a highly decentralized, bottom-up approach that's aimed at building a community of support while saving the organization money on IT overhead. "Our strategy is shaped by the need to be frugal," says Justine Lam, Paul's e-campaign director in Arlington, Va.

A newbie to the political battlefields and the second person to join Paul's campaign staff, Lam says that when she first began crafting Paul's e-strategy in March 2007, "we knew we couldn't run the same kind of campaign that [Mitt] Romney or McCain could with the money they had." So the need for thrift led to the invention of money-saving techniques, such as uploading video content onto YouTube rather than chewing up valuable bandwidth on the campaign's Web site.

And because the Federal Election Commission has strict regulations prohibiting campaign organizers from instructing supporters on what they should do to help the campaign, the Paul team settled on a strategy of suggesting that devotees develop their own independent campaign tactics.

That strategy "ricocheted through the Web and has allowed people to take ownership of the campaign," says Lam, who previously managed webcast lectures for the Institute for Humane Studies at George Mason University in Arlington, Va.

"Ron Paul is probably the best example" of a presidential candidate who has made effective use of grass-roots e-mail and blogging, says Karen Jagoda, president of E-Voter Institute in La Jolla, Calif.

The community-driven online fundraising strategy has worked brilliantly and has distinguished the Paul e-campaign from the rest, say Rasiej.

And it's not just about spreading Paul's message via text, says Julie Germany, deputy director of the Institute for Politics, Democracy & the Internet at the Graduate School of Political Management at George Washington University in Washington. His supporters' use of social media to post video clips about the candidate on YouTube and other sites "has been incredible," she adds.

For example, the YouTube video on the independent site RonPaulMoneyBomb.com may be among the most effective political videos yet. And, of course, Paul is the subject of that groundbreaking dorm room interview conducted by college student James Kotecki (*http://youtube.com/watch?v=nQi7PaYKqTU*).

The strategy appears to be delivering, at least from the standpoint of online attention. According to Hitwise Pty., a New York-based online measurement service, Paul attracted nearly 38% of Web traffic among all candidates in the third week of December, trailed by Huckabee, with just over 16%. The Obama official Web site drew the most traffic among Democratic candidates, with just under 11% of the total share, says Hitwise.

Candidates such as Sen. Hillary Clinton (D-N.Y.) have raised far more money than Paul overall; Clinton's most recent FEC filing, on Nov. 21, shows that she has netted more than $45 million. However, Paul's community fundraising approach has generated more than $19.5 million in the fourth quarter of 2007, easily outpacing all of the other candidates in terms of online fundraising, says Rasiej.

Other numbers underscore the effectiveness and efficiency of Paul's online fundraising efforts. For example, Paul and McCain each raised about $5 million during a November fundraising cycle. But Paul did so while attending just 82 events, whereas McCain made more than 500 appearances, says Rasiej.

THE 'MONEY BOMB'

The watershed moment for Paul's online fundraising efforts was the "Ron Paul Money Bomb" of Nov. 5, when the campaign set a one-day record for contributions. "We've never seen anything like it," says Lam. "We raised $4.2 million that day under a completely supporter-driven 'money bomb.' No one has ever done that."

Then, on Dec. 16, Paul upped the ante, raising an astounding $6 million.

The most that former Vermont Gov. Howard Dean amassed in a single day of online contributions during his 2004 presidential run was $500,000, according to Lam.

Runner Up

PERHAPS THE MOST real-time candidate at the moment is former North Carolina Sen. John Edwards, thanks in large part to his e-campaign's groundbreaking use of Twitter Inc.'s instant messaging/social networking service.

Twitter is a free social networking service that enables people to communicate with friends or colleagues using SMS, instant messaging, e-mail or other applications. The service includes a feature that allows users to send a short update to the site (140 characters or less) via "micro-blogging," and Edwards has been known to use it to let people know where he is on the campaign trail and what he's doing.

These up-to-the-minute updates are new in campaigns but not in the lives of the youngest voters, says Christopher Malone, associate professor of political science at Pace University. Edwards "is appealing to a younger crowd through the technological means that younger people are familiar with," he says.

"We want to have as many people as possible exposed to John Edwards' message, follow him online and sign up to support the campaign," says Aaron Myers, director of the campaign's Internet strategy. To that end, a videographer travels with Edwards, and videos shot on the campaign trail have logged hundreds of thousands of visits on YouTube. "It gives us an opportunity to reach folks who might not be seeking political news or [news] about John Edwards in general," says Myers.

Whether the use of Twitter and other Web 2.0 tools will make the difference for Edwards remains to be seen, says Malone. But meanwhile, he says, "it's helping him to stay in the ballgame."

– THOMAS HOFFMAN

One of the truisms in Internet politics is that it's easier for "edge" candidates like Paul to catch fire online with would-be voters than it is for more mainstream politicians, says John Palfrey, executive director of The Berkman Center for Internet & Society at Harvard Law School. That's because campaigns with smaller budgets and support bases "are more willing to take the risk of using the Internet in experimental ways," he says.

"Ron Paul is running a very online-focused campaign," says Palfrey, "and he's becoming [more] relevant as a result."

But it has yet to be seen if Paul's online savvy will keep him in the race.

"You still need a labor-intensive campaign to get the vote out," says Christopher Malone, associate professor of political science at Pace University in New York. "For all of Howard Dean's Internet pioneering, he didn't have enough feet on the street to pull the vote out for him in Iowa." ■

Culture Clash

DURING THE RUN-UP to the 2004 presidential election, much of the e-campaign buzz centered around former Vermont Gov. Howard Dean's savvy use of the Internet to help build community support and raise funds online.

In the four years since Dean's presidential bid fizzled, there have been many changes in the e-campaign landscape, including the emergence of social networks such as Facebook and MySpace. But experts remain cynical about just how far political campaigns have progressed in their use of technology to engage potential voters.

"We have a joke around our offices that the political space is about 10 years behind when it comes to using technology as a tool to engage and enable people to participate," says Julie Germany, deputy director of the Institute for Politics, Democracy & the Internet at the Graduate School of Political Management at George Washington University.

Germany says many candidates are doing little more than using Web tools as digital brochures. An exception is the John Edwards campaign, she says, which has been using blogs, podcasts and other multimedia features to maintain and expand its base since the 2004 election.

Andrew Rasiej, co-founder of TechPresident.com, says the current crop of e-campaigns is generally less technologically innovative than the Dean campaign was in 2004. That's because many are "trying to apply top-down control over the process" rather than building an Internet community of supporters from the ground up.

Given the Internet's bottom-up bias and the Republicans' historically top-down approach to media, Rasiej is convinced that Democrats are generally ahead in their use of Web 2.0 technologies in campaigns. Democratic candidates such as Edwards and Barack Obama, for example, are actively trying to get supporters to communicate with one another via social media tools such as Meetup and Facebook, says Rasiej.

"The Internet is anti-top-down. It's a bottom-up culture" says Rasiej. "So the Republicans are having a very hard time transitioning."

– THOMAS HOFFMAN

_INFRASTRUCTURE LOG

_DAY 82: There are so many risks out there. Traffic spikes, natural disasters, mergers. How do we prepare? One in three companies don't recover from unplanned downtime.[1] Would we?

_Gil wrapped everything with bubble wrap. Just to be safe.

_DAY 83: I'm preparing with IBM Business Resilience Solutions. IBM Business Continuity Services help us assess our risks and design a proactive plan to deal with them. IBM Tivoli gives us the visibility to diagnose and fix infrastructure problems. And the robust availability features of the IBM System p™ give us maximum uptime.

_No more bubble wrap. And I have to mail a package. Great.

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Tivoli.

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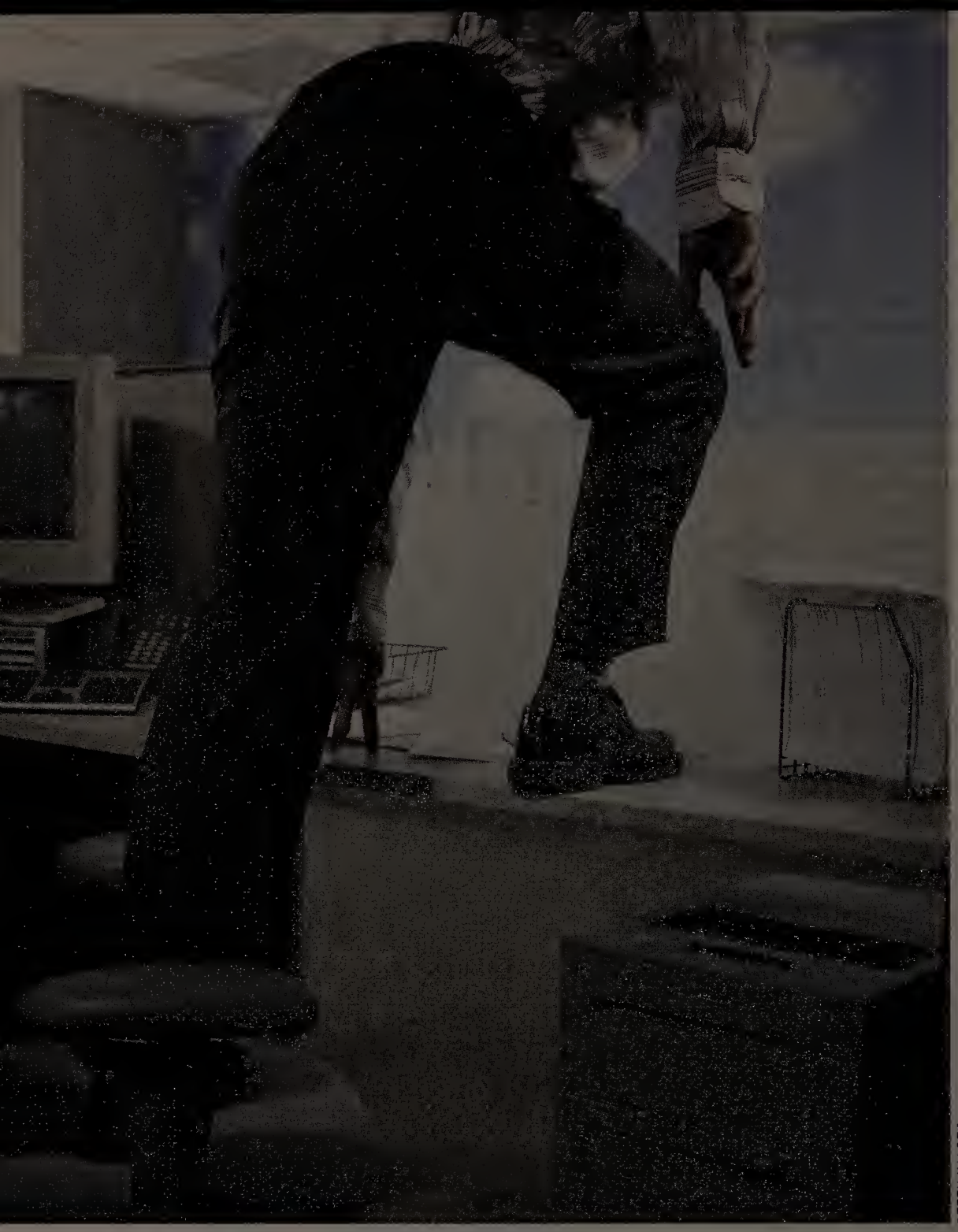

GETTY IMAGES

8 Ways to Boost Your Career in '08

How to stay ahead of the coming changes.

By Mary K. Pratt

TODAY'S IT professionals are an evolving breed.

IT jobs keep morphing as companies demand not just technical know-how, but more business acumen, analytical skills and industry knowledge as well.

Kudos if you've pulled that all together. But don't rest just yet. The evolution isn't over, since the year ahead promises more changes. If you want to stay in the driver's seat of your own career, put the following items on your to-do list.

1 INCORPORATE SECURITY INTO YOUR RESPONSIBILITIES. Security and related requirements, such as business continuity and disaster recovery planning, are permeating all levels of the organization. That means all IT workers, and not just the security folks, will have to contribute by understanding how business processes, technical requirements and security intersect.

"Everyone has to understand security to a certain degree and apply it to their responsibilities," says Sam Helmich, vice president of technology at ADM Investor Services Inc. in Chicago.

The learning requirements vary depending on your IT position, but Helmich recommends that you seek out security classes and certifications. Finding a mentor from the security team is another good way to begin to understand the security environment.

2 RE-ENGINEER PROCESSES. IT has always been responsible for keeping everything running, and developing new systems, says Michael Cummins, CIO at the Georgia Institute of Technology's College of Management and a clinical professor of management. But now he sees a new responsibility emerging: re-engineering business processes and workflow.

"We've seen movement to business processes and workflow analysis as you try to show how systems can help re-engineer how you do the work and make it more efficient," Cummins says. "That's where we see

Continued on page 28

IBM

_INFRASTRUCTURE LOG

_DAY 89: Our power and cooling costs are out of control. We spend the bulk of our IT budget just keeping the data center cool. I told Gil we need to go green in a big way.

_DAY 91: Gil took us green...kelly green, to be exact.

_DAY 93: You don't go green with paint. You go green with IBM Cool Blue™ technology and energy management services. Advanced server and storage virtualization can help consolidate our boxes to lower energy usage. And the new IBM POWER6™ systems help us use less energy doing the same amount of work.[1]

_Our data center will be green now. And painted white.

Learn how to make your data center more efficient:
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Continued from page 26
all these big productivity gains."

To deliver on this, you must understand how your business colleagues actually do their jobs, he says. You can start by signing up as a project lead, finding a business-side mentor or delving into systems analysis.

3 USE ANALYTICS TO GUIDE BUSINESS DECISIONS. "We're seeing more and more companies that are stellar examples of using data analysis to run their business," Cummins says. Casinos, for example, collect and analyze detailed data on individual players and then tailor their marketing based on those findings.

Companies in other industries are following suit, which means you'll have to set up the systems and understand what data to mine and analyze.

To brush up on analytics, volunteer for projects that expose you to the needs and goals important to non-IT departments, study vendor information on how business intelligence applications can provide data for making decisions, and get training in Six Sigma, a data-driven methodology for eliminating defects.

4 BE MORE VERSATILE. There will always be a need for deep technical skills, but you'll be obsolete if all you can offer is one particular area of expertise, says Pamela Taylor, a solutions architect at a subsidiary of a Fortune 50 company and vice president of Share, an IBM user group.

"Keep yourself open to new approaches," Taylor says. "While there is some need for specialization and to demonstrate an expertise for the particular role you're in now, you must keep yourself aware of and consistently educated in new things that are emerging."

5 WORK ON MULTIFUNCTIONAL PROGRAMS AND MULTIDISCIPLINARY TEAMS. Companies are putting together more teams of people from diverse departments to work on technology-related projects, says Diane Morello, an analyst at Gartner Inc. Getting assigned to teams like those is one key to broadening your business knowledge while becoming known outside of IT.

In addition to being comfortable working on teams, she says, you should also find ways to let others know about your abilities, so you can get assigned to teams that you can contribute the most to.

Try to work for managers who operate across business units. And if you can get assigned to a boundary-spanning role, seek some relief from daily operational duties so you can focus on the big picture.

6 BE MORE ACCOUNTABLE. The folks in finance, marketing, human resources and other corporate departments already use data to demonstrate the value of their contributions. IT workers will increasingly have to do the same, Cummins says.

Granted, evaluating an IT shop can be difficult because of the lack of productivity metrics and the intangible nature of some gains. But be prepared to show your value. Learn Six Sigma-type tools and benchmarking, and learn from business managers who have reputations for running efficient departments.

7 BEEF UP YOUR BUSINESS SKILLS. This requirement is old news, but 2008 will put an even greater emphasis on business acumen, says Kate M. Kaiser, an associate professor of IT at Marquette University and coordinator of the Society for Information Management study "The Information Technology Workforce: Trends and Implications 2005-2008." The need for business knowledge is moving further down the IT workforce chain, she says. Even newly minted IT workers will need to have business savvy.

Moreover, companies are looking for IT workers who have expertise in functional areas such as marketing or finance, says David Foote, CEO and chief research officer at Foote Partners LLC, an IT human resources consultancy in New Canaan, Conn.

Getting a degree in business management — an MBA if you already have a tech-related bachelor's, or a bachelor's in business if you have an associate's in technology — can help prepare you for this new reality, Kaiser says. But so can on-the-job management experience, such as leading projects and taking advantage of interactions with business people to learn what they can teach you.

8 MANAGE YOUR OWN CAREER. You can't rely on your manager, company or vendors to plot a road map for you, because those predetermined plans might be too narrow or even obsolete, Foote says. You must prepare for tomorrow by evaluating your skills yourself and filling in what's missing through certification, education, on-the job experience and a can-do attitude.

"This is the year you can no longer sleepwalk through your career," says Morello. "Each person has to take ownership of his or her career path." ■

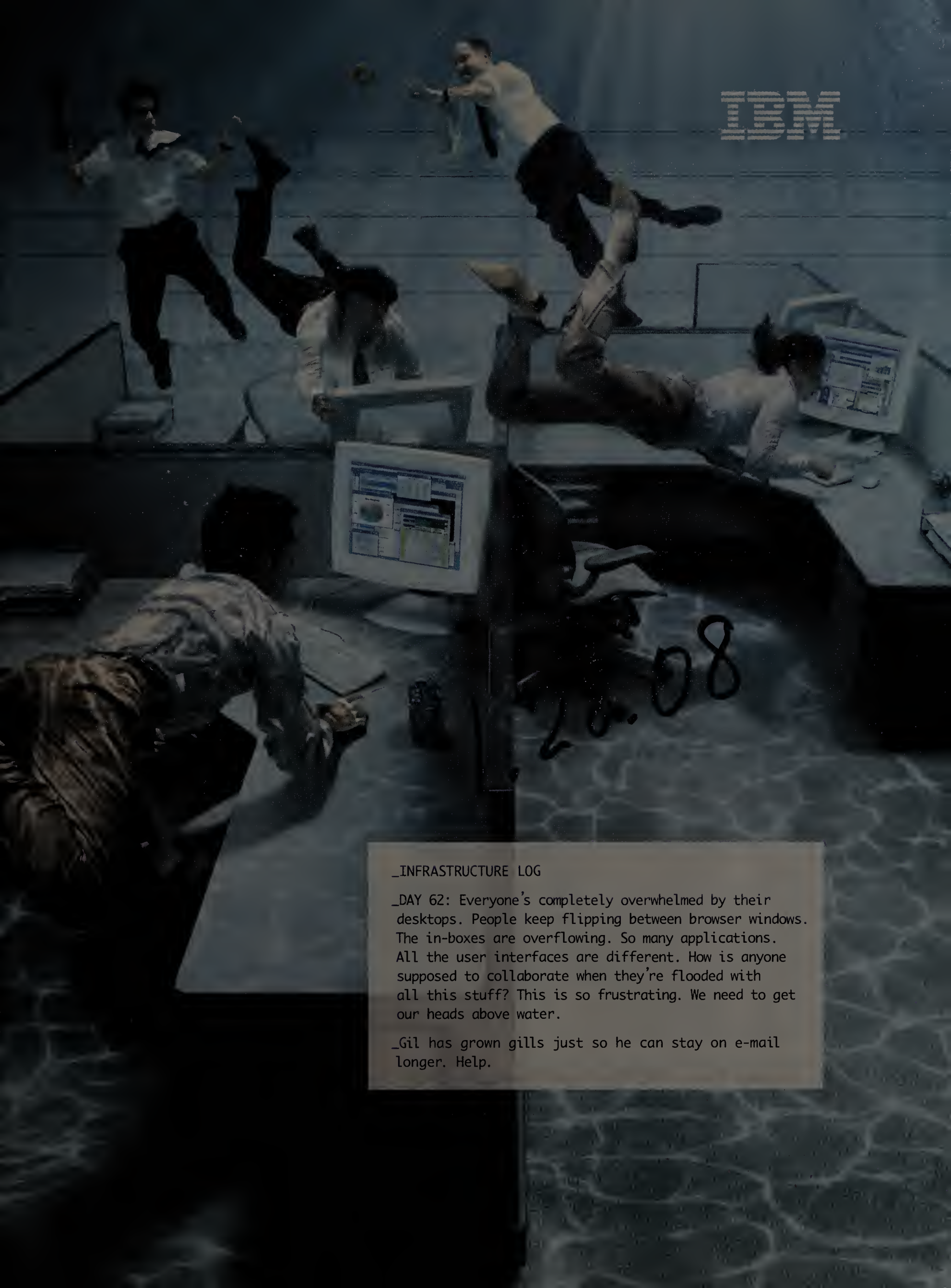
Pratt *is a* Computerworld *contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.*

Maximize Your On-the-Job Learning

Smart IT professionals learn essential skills from colleagues and mentors on the job, both within IT and on the business side. But that kind of learning doesn't happen by chance; it requires an explicit social contract, says Mark D. Lutchen, a partner in the IT effectiveness practice at PricewaterhouseCoopers in New York. Here's how to make the most of on-the-job learning relationships:

- **Set clear expectations about what skills you hope to gain from your colleague.**
- **Agree on how often you'll meet over a set period of time.**
- **Establish in advance what you want to discuss each time to ensure a worthwhile meeting.**

– MARY K. PRATT



_INFRASTRUCTURE LOG

_DAY 62: Everyone's completely overwhelmed by their desktops. People keep flipping between browser windows. The in-boxes are overflowing. So many applications. All the user interfaces are different. How is anyone supposed to collaborate when they're flooded with all this stuff? This is so frustrating. We need to get our heads above water.

_Gil has grown gills just so he can stay on e-mail longer. Help.

Is Your CEO a Cybercrime Target?

Here's how to protect him — and your company. By Barbara Darrow

WITH ONE mouse click on a seemingly internal e-mail, your CEO could unwittingly enable a cybercriminal to mine his hard drive for credit card numbers, passwords to corporate databases or other proprietary information.

If credit card phishers are the carpet bombers of computer crime, C-level attackers are the snipers. They mine information from a relatively small number of wealthy or high-status individuals in positions of power. They are after corporate and personal data, both of which can be extremely lucrative. They can use that information to wreak havoc elsewhere, or they can sell it for profit.

These types of targeted C-level attacks are rare, but they're on the rise, and they're sophisticated enough to make the average IT manager's blood run cold.

FOLLOWING THE MONEY

C-level attacks "started out about a year ago in very low numbers but have been ramping up since," says Matt Sargeant, senior antispam technologist at MessageLabs Ltd., a security services provider in New York.

There are three reasons for that, observers say: Executives are reading their own e-mails and using their own PC applications rather than leaving those tasks to administrative assistants; they're traveling more with less-secure digital devices in tow; and, like everyone else, they're exploring the power of social networks, inadvertently exposing details that could make them the targets of criminals.

The results can be chilling.

Last summer, 24-year-old Russian Igor Klopov and four others were indicted by a New York grand jury for stealing $1.5 million and attempting to steal $10.7 million more from about a dozen victims. Klopov used the Forbes 400 list of the world's wealthiest people to pick his marks. They included Texas businessman Charles Wyly and TransUnion Credit President Anthony Pritzker. The government charges that Klopov and his gang found information on some of their victims' real estate holdings and lines of credit — much of which was publicly available — and used it to build dossiers on them.

The gang allegedly created and used fake IDs to contact the victims' financial institutions (JPMorgan Chase & Co., Merrill Lynch & Co. and Fidelity Investments) to try to gain information on their accounts, get duplicate checkbooks and the like. Luckily, the institutions flagged the attempts and contacted the authorities.

An IT manager at a Fortune 500 financial institution says his company, too, recently fought off a C-level attack. In this instance, a bank executive's laptop was hacked while he was working from home. The hacker captured passwords and log-ins and tried to access some of the bank's accounts. The attempt, which was later traced to a Russian IP address, failed, says the IT manager, who spoke on condition of anonymity.

On Sept. 12 and 13 of 2007, MessageLabs detected 1,100 suspicious e-mails to senior executives at companies around the world. The messages, ostensibly from a recruiter, used a Microsoft error message to lure victims into clicking on a Rich Text Format attachment. That enclosure contained an executable file that would install two files on the target computer then pass information back to the perpetrator.

F-Secure Corp., a security firm in

Continued on page 32

> **"It's the Wild, Wild West out there. Publicly held companies are forced to reveal a lot of information about their executives, so that's already out there. I tell them not to compound that by putting more information up on social networking sites.**
>
> **GEORGE BROWN,** CEO, DATABASE SOLUTIONS INC.

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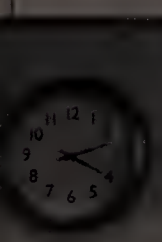

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Helsinki, Finland, has followed similar threats for two years. "It's obvious in these cases that the attackers have taken effort and time finding and researching the target," says Mikko Hyppönen, F-Secure's chief research officer.

In designing such messages and selecting recipients, criminals use not only relatively sophisticated software tools, but also the reams of publicly available information about corporate executives.

That data comes from U.S. Securities and Exchange Commission documents and corporate Web sites, and also from social networking sites like LinkedIn, Zoom and Facebook, where information that executives post can be seen by anyone. Details about past jobs, college affiliations and major projects can all be used to create messages that the recipients are likely to open.

"It is serious, because they [send] an e-mail from outside but make it look like it's coming from inside the company, from someone who is in contact with the target. [And they might think]

How to Fight Back

A recurring theme among IT officials is that the execs, who are used to their positions of power and privilege, don't like to be told how and when to use their PCs and handheld devices. They want to use these tools when and where needed, regardless of their surroundings and the attendant security (or lack thereof). But your job is to protect them from themselves. You need to make them understand the threat and show them how to mitigate it. Here are some steps to take:

Bolster security for executives, both in the office and at home.

- **Make sure anti-malware software and services are up to date at the desktop, server and network levels.**
- **Strictly enforce basic security practices, including frequent changes of passwords.**
- **Immediately plug any security holes in Word, Excel or Acrobat.**
- **Ensure that the operating systems on handheld devices – typically beyond the scope of desktop antivirus programs – are always up to date.**

Get the word out.

- **Drill executives on whom to notify if they click on a Word, Excel or PDF document received via e-mail and the application appears to launch but then shuts down and relaunches. This may indicate that a Trojan horse is attempting to cloak itself behind the real application.**
- **Teach them to be wary when an e-mailed document requests that they run embedded macros. Rule of thumb: If there is any doubt about the validity of the request, don't do it.**

Make the road safer for roaming executives.

- **Insist that they always use a virtual private network when linking into company networks from outside.**
- **Forbid them to send confidential information of any kind – including personal information – over an unsecured Wi-Fi connection.**

Be wary of social networking.

- **Explain that criminals may be watching high-profile posters with something other than benign interest.**
- **Make them aware of social engineering tactics that could prompt them to unwittingly give away their bank account numbers or put the company at risk.**

– BARBARA DARROW

The DNA for performance evolution.

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it's someone who works two floors up," Hyppönen says.

In such cases, an attached Word or Excel file is likely to carry a Trojan horse. "It really is a document," Hyppönen explains, "but it's corrupted, and it will crash your version of Word and run the exploit."

F-Secure has seen cases where hackers were able to identify the antivirus program the target company was running and modify the exploit code just enough to go undetected.

INSIDE JOBS

The prospect of executives becoming targets is particularly troubling because the perpetrators often deploy sophisticated Trojan horses, and the attacks require a disturbing amount of inside corporate knowledge to work successfully. That knowledge sometimes comes from inside sources who know what data the targeted executive is privy to and which employees he might be inclined to trust.

F-Secure has seen 20 to 25 such attacks in two years, Hyppönen estimates. "It's not awfully common, but in those cases where it happens, it's a real nightmare," he says.

Sometimes the breach "was discovered when the sysadmins looked at firewall logs and at where users were connecting and looked for anomalies," Hyppönen explains. "They might see that those two workstations in the R&D department are connecting to a server in China where they shouldn't be connecting."

In other cases, since the exploit sometimes uses software rootkits, a user might start having PC problems. When IT then runs F-Secure's BlackLight or another rootkit detector for debugging and finds a problem, it can detect the presence of malware.

An unforeseen consequence of the social networking trend is that it plays into the hands of C-level attackers. George Brown, a database and security consultant, says he tells CEOs to guard their private information zealously.

"It's the Wild, Wild West out there. Publicly held companies are forced to reveal a lot of information about their executives, so that's already out there. I tell them not to compound that by putting more information up on social networking sites," says Brown, CEO of Database Solutions Inc. in Cherry Hill, N.J. "Don't put anything out there that you don't absolutely have to."

The CIO of a Boston-area health care organization hears that message loud and clear and is extremely cautious in how she handles e-mail of any kind. "I do not open anything unless I'm absolutely sure I know where it comes from," she notes. "If I miss something important, that person will call."

The CIO — who says that the percentage of her organization's IT spending on security increases every year — doesn't participate in any business social networking sites either, and she recommends that other executives follow suit. And talking publicly about security issues? Definitely a no-no, she says (hence her anonymity), "unless you want to make yourself a target." ■

Darrow, *a Boston-area freelancer, can be reached at badarrow@comcast.net.*

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Budget Cuts Call For New Priorities

What could be **more important** to a security manager than **avoiding a data breach?** Only a **life-or-death** situation.

MY priorities have been reordered at gunpoint.

I'm sure that sounds like an overstatement, and I admit that there is no gun pointed at my head. But I *am* talking about a literal gun, even if it's merely a hypothetical one at this point. The fact is, I'm reordering my priorities so that it remains hypothetical.

What I'm talking about is the physical security of my state government agency's offices. We serve the public, and so people must be able to enter reception areas. But why assume that the public would come bearing arms? And why is physical security something that concerns an information security manager?

Because this agency and the entire state government have been hit by deep budget cuts that have decimated staffs and forced cuts in services. I'm now in charge of physical security simply because there is no one else to do it.

As for that armed-intruder scenario, one need only pay cursory attention to the news to realize that such things do happen. It would be irresponsible not to recognize this and try to prevent such events. And when a government agency that provides health care to poor state residents starts cutting those services, you have to be prepared for some troubled soul arriving someday, gun in hand, upset because a wife or child could die without proper medical treatment.

I have said that my No. 1 priority is to safeguard our sensitive client data. A breach could violate HIPAA mandates. I have sworn that there will be no breach on my watch, and that vow has dictated my priorities. I really couldn't imagine anything else taking precedence.

Now I can. Protecting that data is certainly important, and I will continue to do so. But its importance pales in comparison with the awesome responsibility of protecting lives. Making sure our people don't get hurt has to be my top priority.

■ Making sure our people don't get hurt has to be my top priority.

So, what happens to my other priorities?

TOO MUCH TO DO

I've said that I will let IT services slip in favor of security. But can I let information security fall off while I concentrate on securing the physical plant? Not really. Do I have the human resources and budget to do it all? Certainly not. Nonetheless, besides making sure that confidential data is protected at rest and in transit, we must ensure that servers and workstations are patched in a timely manner, that new users are given access only to the resources they need, that accounts are terminated as soon as users leave the agency and that the network remains secure.

Who will do all this work? I often take more than the lion's share of responsibility, to ensure that my staff is not burned out. I end up doing a lot of work that a junior person could do, but there aren't enough junior people to do it. That pushes other work into the background as I eventually approach burnout myself.

With all this on my mind, I dug in my heels and told my boss that I couldn't even think about implementing any new projects until 2009. He understands, though, that "nice-to-haves" must be pushed aside for "criticals." Things that we had planned and budgeted for years in advance have been disrupted by politics.

I recall that physical security wasn't a priority at all back when we had some money available. Back then, we acquired estimates on what it would take to install a key card system, replace all our external doors, and install cameras, microphones, speakers and "buzz-through" capability. But management considered all this to be a luxury, and not something tax dollars should be spent on.

Now that we're out of money, it has become a necessity, and I'm left trying to figure out what must be left undone. ■

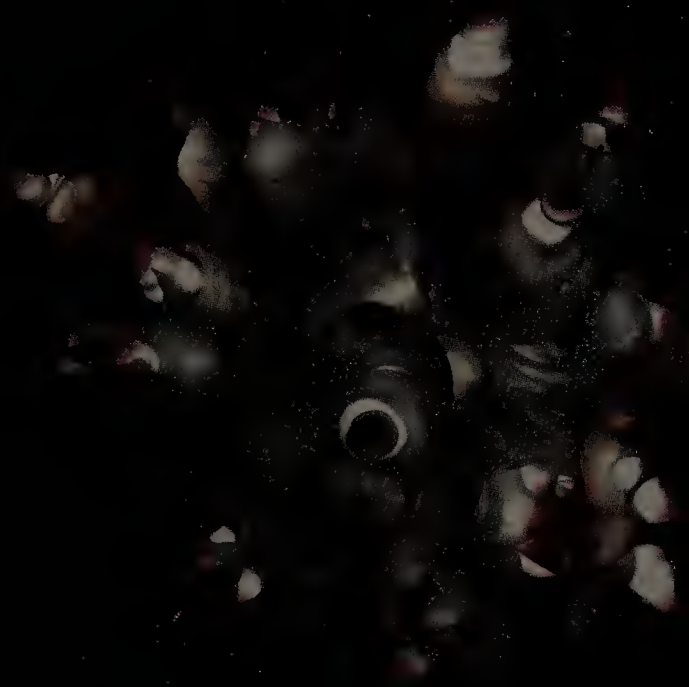
This week's journal is written by a real security manager, **"C.J. Kelly,"** *whose name and employer have been disguised for obvious reasons. Contact her at mscjkelly@yahoo.com.*

Trouble Ticket

AT ISSUE: Physical security has been added to our manager's duties.

ACTION PLAN: Reorder priorities and jettison the least important stuff.

JOIN IN
To join the discussion about security, go to **computerworld.com/blogs/security**.



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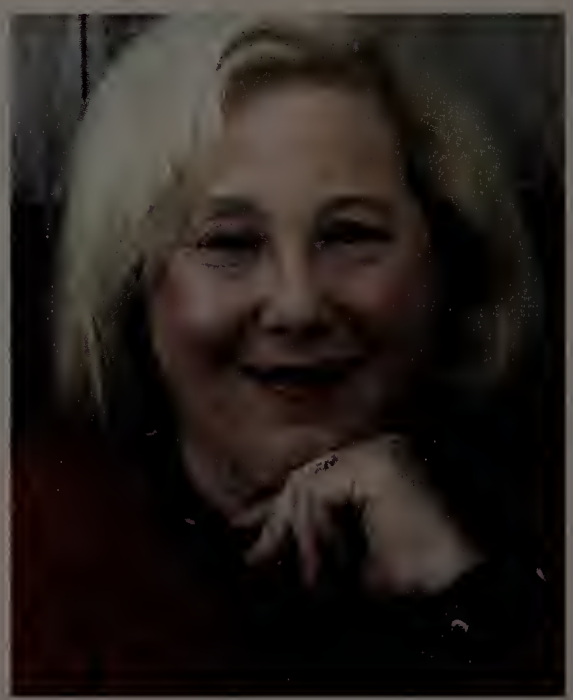
What Makes Great Companies Great?

The answer is simple but profound.



> **People love the idea of making a difference in the world.**

In the current Harvard Business Review, **Rosabeth Moss Kanter** *reports on a two-year exploration of a dozen "progressive megacorporations." Her goal was to discover what makes giants like IBM, Procter & Gamble, Omron and Cemex innovative and agile while other companies their size seem like lumbering, dysfunctional behemoths. Moss Kanter, a professor of business administration at Harvard Business School and author of* America the Principled *(Crown, 2007), told Kathleen Melymuka that what she discovered is simpler and more profound than you might imagine.*

What differentiates the companies you wrote about? They're part of a shift from command-and-control, rules-based hierarchies to a more open, free-form flexible organization where guidance comes from values and principles supported by templates and IT systems that allow people much more freedom to cross what would have been traditional lines of jobs. For example, at Procter & Gamble, some new products were created in Brazil, and the same two people worked on these projects but had three or four different jobs during that period. Regardless of what business unit they worked in, they still continued to work on this line of product. So the project is more important than the reporting relationships.

What are the building blocks of this kind of unified corporate purpose? First, they are very clear about values and principles. They articulate them very clearly, involve many people in discussing and sometimes creating them. They repeat them at every training session; the top executives see their jobs as teaching them. They're reflected in written material everywhere, and you hear them invoked in meetings. The second building block is standardized platforms, templates and processes that give people a common way of doing things and make it easy to change jobs, hold meetings, have consistency across the company, pull projects together.

At Cemex, they realized if they were going to move into other countries that were not familiar, they needed to standardize, and IT was the perfect way to do that. They created the "Cemex way" — proprietary tools and methodologies that make every office, every cement plant, familiar to everybody so they can move people around easily. And when they have an improvement, it spreads worldwide very quickly.

Both these things are highly motivating to employees: standing for something that makes a difference and being able to do the work very well anywhere; having standards everyplace, even when a country's standards are lower and they could get away with less.

How can you get widely diverse employees to buy into common values? The way the values and principles are stated is very general and universal. Most people want to be respected, so respect is often a very important value. That sounds simple, but think of how many workplaces involve lack of respect. The second way is that they give people autonomy. People want to do things they will be proud of, and if they have a voice in the dialogue, they like the outcome better. And managers in these companies see themselves as teachers and mentors.

Once you get people plugged into common values, what practical difference does it make? First, it gives you incredible flexibility in the way you can deploy people. You can look at your entire pool of talent and pull together any team you need. Second, it's highly motivational. People love the idea of making a difference in the world — a purpose larger than today's project and how much money it will make. It gets them thinking of improvements for their own community and how they could be more creative and innovative.

What about those who say, "Our values are to provide shareholder value." Does it matter what the values actually are? It matters that the values describe something longer-term that contributes to more people than just shareholders and is more sustainable. These giants certainly want to make money for shareholders, but they have other purposes that are even more important. It's easy to be cynical, but ask yourself what really matters in your own life and what kind of place you want your children to work. ■

The Payoff

Harvard Business School professor Rosabeth Moss Kanter says the companies she studied have achieved an amazing balance. For example:

- **They globalize and localize.**
- **They standardize and innovate.**
- **They foster a common culture and respect individual differences.**
- **They maintain control by empowering employees to do the right thing.**
- **They produce business and societal value.**

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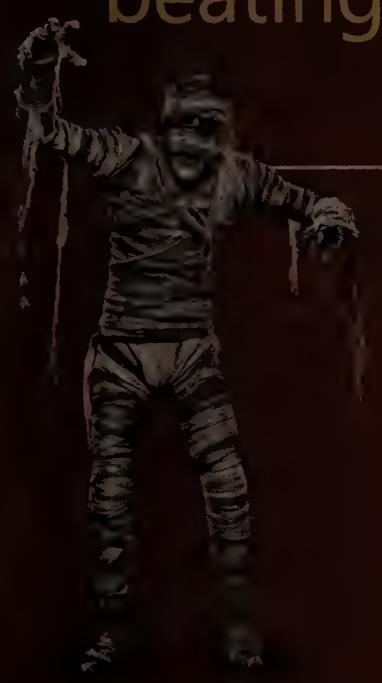
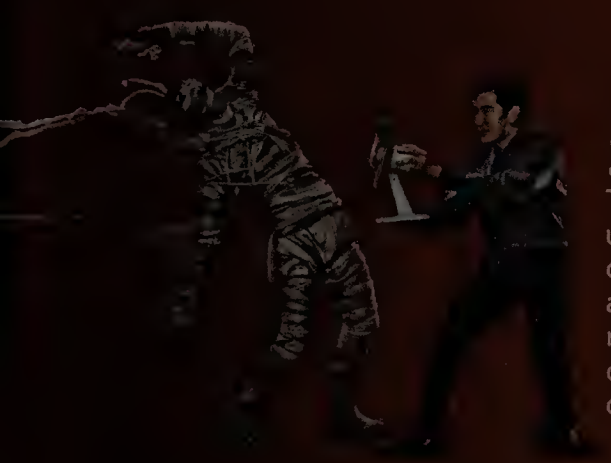


1. Know your hieroglyphs.
The ancient hieroglyphs speak of the Pharaoh's return, and his vicious attack on a midsize enterprise IT department. How it all turns out is less clear, as the hieroglyphs got chipped and are hard to read. Sorry.

2. Make a torch.
The Mummy, being wrapped in dry linen, is extremely flammable. Make a torch from a rolled-up newspaper and swing it in his direction. You'll get his attention immediately and he'll quickly lurch away.



3. Unwind him.
The Mummy is easy to unwind. Sit him in a swivel chair, grab his loose end, and spin. Keep him spinning, make him dizzy, and once you're done, he'll be completely exposed.

4. Summon the sun god Ra.
Borrow an ancient staff or a magic ankh. Speak the magic words to summon the mighty power of the sun god Ra, and stand back, because Ra does not mess around once summoned.

5. Be the Mummy's daddy.
Ancient Egyptian royalty was dynastic, meaning the pharaoh's firstborn child became the pharaoh. Disguise yourself as an older Mummy, tell the Mummy you're his grandfather, and he'll be obligated to do your bidding.

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■ OPINION

Paul Glen

Stop That!

THOSE OF YOU who are regular readers of this column probably already know that I'm not a big fan of New Year's resolutions. They set people up for failure by setting unrealistic expectations that only lead to disappointment and depression. But I am an advocate of managerial reflection, of taking a little time on a regular basis to think carefully about your role and how you fill it.

So this year, I'd like to suggest a different approach to your New Year's reflection. Instead of thinking about all the goals you want to achieve and things you want to do over the next year, spend a little time thinking about the things that you want to quit doing.

I've noticed that what holds many people back is not what they are failing to do but what they are doing. Sometimes we find success not by doing something new so much as by ceasing to do what blocks it.

Here are a few common things that I suggest people quit doing:

Stop judging your current performance by past standards. Most managers got to be managers by being successful producers. We all start out as individual contributors, and those who eventually become managers are those with a good track record of individual contributions. So experience teaches us to measure ourselves, our value, our self-worth, by how much we produce. And as long as we are individual contributors, this continues to serve us well. But once we become managers, we are no longer measured based on the product of our own hands. We are measured based on how much we help others produce.

I'm often startled by the number of managers who, even after years in leadership roles, still cling to their old ways of measuring themselves. It's not an easy transition to make, but measuring yourself by outdated standards is a setup for failure.

■ I've noticed that what holds many people back or limits their success is not what they are failing to do but what they are doing.

Stop conflating what's comfortable with what's best. Everyone has a comfort zone — those things we like to do that we find fulfilling and that don't cause undue stress or anxiety. I would hazard a guess that most of us have had a boss at some time or another who seemed unable or unwilling to do things that fell outside of his comfort zone. Think about how frustrating it was to try to get him to make a decision he was uncomfortable with or to confront a user who intimidated him. Usually, in my experience, that boss would come up with all sorts of reasons why doing what needed to be done was a bad idea. But they always struck me as phony justifications for remaining in his comfort zone.

So, what's your comfort zone? Have you been sticking to it and finding reasons why what's comfortable for you is what's best for everyone?

Stop following routine blindly. Although most leadership literature seems to focus on great change, great events or heroic efforts, it seems to me that everyday life for most managers is more mundane and routine. The drumbeat of everyday life goes on. We attend our status meetings. We read our reports. We write summaries and updates for our customers and bosses. But which of these are truly value-added activities? Which of these could be jettisoned without the organization grinding to a halt or anyone even noticing?

It's worth doing a spring cleaning of your schedule to be sure you're focusing your energy on what will have the best effect on the organization, on your group and on your own career.

So before you decide what you are going to do next year, give a little thought to what you're not going to do. ■

Paul Glen *is the founder of the GeekLeaders.com Web community and author of the award-winning book* Leading Geeks: How to Manage and Lead People Who Deliver Technology *(Jossey-Bass, 2003). Contact him at info@paulglen.com.*

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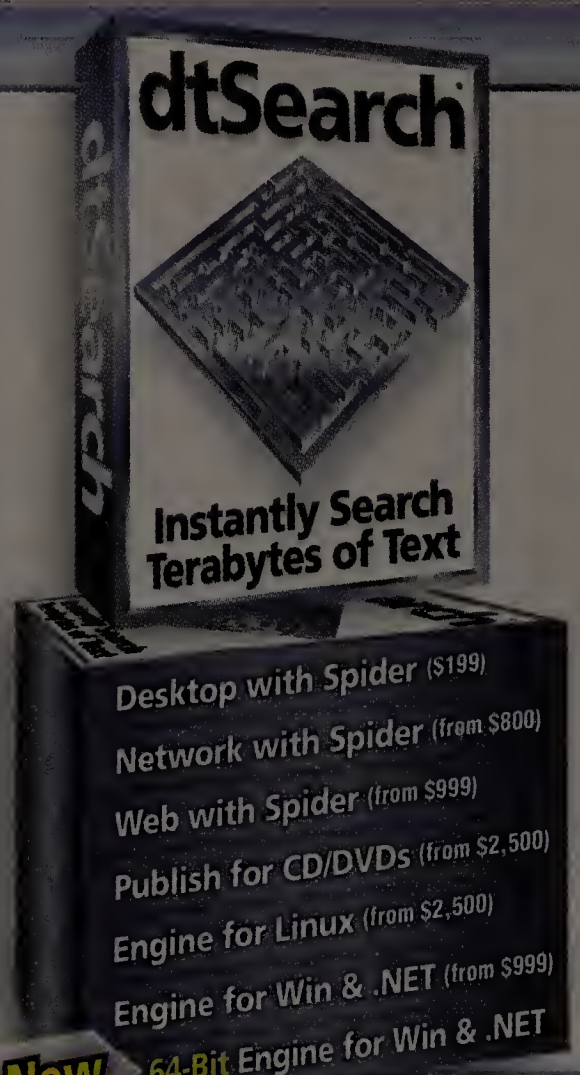

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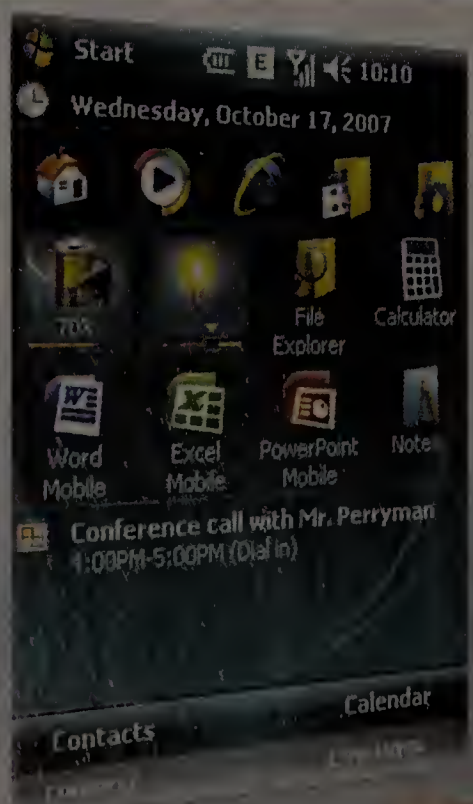

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Another thing that employed job hunters have to be wary of is taking calls from prospective employers on their work phones. But you don't want a recruiter or potential employer to get the idea that you're not available, either. Of course, cell phones solve that problem to a large degree. But you can't always take calls on your cell phone – doing so during a meeting with your current boss is inappropriate, even if the call isn't from someone who could be your next boss.

With voice mail from YouMail Inc., you can feel better about letting calls from recruiters slip by. YouMail lets you personalize greetings for each phone number in your personal phone book. You'll need the numbers of any recruiters or hiring managers who might try to contact you, so that when they call, they'll hear you say something like, "Hi, Dave. I'm sorry I missed your call, but I'm very interested in the job. Let me know the best way to reach you."

Business Meets Academia

>>> HOW U.S. COLLEGES AND UNIVERSITIES ARE WORKING WITH THE PRIVATE SECTOR TO DEVELOP NEXT-GENERATION IT LEADERS

SCHOOL: Northeastern University's High-Tech MBA program, Boston

DOES IT HAVE AN IT ADVISORY COUNCIL? Northeastern has an "alumni board" made up of a cadre of alumni from different graduating classes who are CIOs, IT managers and industry executives, says Marc Meyer, Matthews Distinguished University Professor and a director of the school's High-Tech MBA program. In addition, Northeastern draws input from people who have attended a version of the program offered at EMC Corp. and IBM.

IT EXECUTIVE FEEDBACK THAT HAS HELPED AMEND THE CURRICULUM: Business model innovation, including ways that a company can profit from new products or services such as software as a service, was introduced to an IT innovation course early last year, says Meyer. In 2006, Northeastern added a course on mergers and acquisitions after several of its recent alumni were placed into M&A-related roles, Meyer adds.

NUMBER OF HIGH-TECH MBA DEGREES AWARDED IN SPRING 2007: Thirty to 35 at the university, with another 30 degrees awarded at EMC.

One set of skills that employers have been asking for recently is an ability among graduates to adapt a company's existing technologies for new markets. This would include applying a defense contractor's technologies to homeland security issues, for example, says Meyer.

A second set of oft-desired skills involves intellectual property strategy and management savvy, says Meyer.

One interesting wrinkle in Northeastern's High-Tech MBA program is its emphasis on return on investment for its students, most of whom are 30-to-40-year-old managers. The program costs roughly $70,000 to attend, and "we tell students that our goal is to get them half of that [amount] back in salary increases and bonuses within 18 months," says Meyer. "We keep track of this pretty closely."

– THOMAS HOFFMAN

Getting the Big Bucks Means Always Having to Say You're Sorry

Respondents were asked to state their incomes and whether they apologize regularly after a mistake or argument.

Annual income	Likelihood of apologizing regularly
Over $100,000	92%
$75,000 to $100,000	89%
$50,000 to $75,000	84%
$25,000 to $50,000	74%
Less than $25,000	52%

SOURCE: ZOGBY INTERNATIONAL POLL OF 7,590 AMERICANS, AUGUST 2007

PAGE COMPILED BY JAMIE ECKLE.

25% Percentage of people who said they consider their offices to be the germiest places they encounter on a regular basis. That ranked higher than public restrooms, at 19%.

SOURCE: BOOTH RESEARCH SERVICES INC. ONLINE SURVEY OF 1,005 U.S. RESIDENTS, SEPTEMBER 2007

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Requirements - Bachelor's degree in Computer Science, Engineering or related field, and at least 5 years of progressive systems experience in application programming languages, design methodologies and software architecture. Experience must include use of Java, EJB, Struts and JSP technologies; application servers including JBoss, Apache TomCat, IBM WebSphere and RMI; and integrated development environments including Eclipse, Websphere Studio and Net Beans. Experience must also include at least 3 years with the LINUX operating system; databases including DB2, Sybase ASE, Oracle 10g, and Concurrent Versioning System; Visio design tool; and Software Development Lifecycle methodology.

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TRUE TALES OF IT LIFE AS TOLD TO SHARKY

New Year, Same Old Attitude

Pilot fish arrives at work to find a usually overconfident consultant white in the face. He left his laptop on all night under a hot work light, and now it appears to be dead. "Of course, his most recent work was not backed up," says fish. "My first job: Get him to breathe. New suggestion: If the laptop is hot, cool it down. We had a fan heater in the office, so we set it to cold and aimed it at the hot laptop. Half an hour later, the cooled-down laptop turned on, booted up, and all the files were there. Color returned to his face. Sadly, he also returned to his old self. Reprogramming needed there."

OK, Got It

This pilot fish fixes printers at a government facility where broken machines are sent in for repair. And the trouble ticket for this one seems straightforward enough. Under "Describe the Problem," it reads: "Self-destructed. Parts coming out of the machine."

Status Unchanged

It's the late 1990s, and this pilot fish who's preparing for Y2k is stunned to learn that his boss has canceled all the software support contracts. "He didn't understand what they were for, so he was 'saving the company money,' " grumbles fish. "It cost us five times as much to have them reinstated, and because of the high cost, the procurement took nearly six months to fund. My boss's boss wanted a daily report on the status of our Y2k upgrades, so I printed a generic report that said, 'All upgrades on hold awaiting reinstatement of software support contracts.' Every day my boss came in, and every day I handed him the report on top of the stack. If anybody ever noticed, they never said anything."

Aha!

User tells pilot fish she can't read CDs in her PC. "When I popped the drive open, I noticed a lot of small, shiny pieces of stuff all over," says fish. " 'Oh,' she said, 'we had a CD blow up in the drive last week.' Seems they had a CD with a crack in it but kept using it anyway – until it shattered."

Hey, Mom!

New employee expense system no longer just uses a password; now it also asks one of several questions at random when a user signs on. "These are fixed-form questions such as 'What was your mother's maiden name?' " reports a pilot fish on the system. "During initial setup, I entered the answer, which was four characters. I received the message 'Answer must have a minimum of six characters.' Tell me that I'm not going to have to write the answer to *that* one down. . . ."

■ *Write down your true tale of IT life for Sharky and send it to me at sharky@computerworld.com. I'll send you a snazzy Shark shirt if I use it.*

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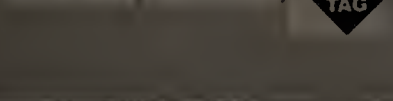

■ FRANKLY SPEAKING

Frank Hayes

Prisoners of Legacy

IS IT RIGHT that impoverished third-world children have more innovative technology than corporate users? Don't answer yet. First, take a look at the slew of recent news articles, reviews and blog posts about the XO, that little green educational laptop developed by the nonprofit organization One Laptop Per Child.

U.S. gadget hounds started getting their hands on the XO over the past month through the OLPC's "Give One, Get One" program, under which a donor paid $399 for two XOs and got to keep one while the other one went to a third-world child.

The consensus: The XO has lots of neat, highly innovative features, including a radical new user interface and miraculously easy wireless networking. It also has a small screen, a tiny keyboard that makes touch-typing almost impossible and no support for Microsoft Office. Oh, and it looks too cute for serious office use.

You might almost think it wasn't designed for people like us.

Now consider the other recent batch of reviews of a little laptop: The Asus Eee, a commercial product that also sells for around $400. That's if you can find a retailer with an Eee in stock; *Computerworld*'s Eric Lai went to Taiwan to buy his.

Lai's conclusion: The Eee has some neat, innovative features. It also has a screen even smaller than the XO's, a shrunken keyboard, poor battery life, a fan that's too loud and, because it runs on Linux, no support for Microsoft Office. And it was designed for kids and women, so "cute" is high on the spec sheet, too.

But Lai also reports that lots of Eees are being sold to young Taiwanese businessmen who use them for sales presentations. And Eees are selling as fast as Asus can make them.

So it's not just third-world kids who get more innovation than our users. It's kids, women and Taiwanese salesmen.

■ Everyone from third-world kids to Wall Street yuppies can get more innovation than corporate users.

But wait — there's also that other widely reviewed $399 device, Apple's iPhone. In Applespeak, *cute* is pronounced "elegant," but the iPhone is still packed with innovative features, it won't run Microsoft Office, and all the big analyst outfits pronounced it not ready for corporate use.

In other words, everyone from third-world kids to Wall Street yuppies can get more innovation than corporate users.

And we in corporate IT are the ones who saddle users with PCs that really haven't changed much since the 1980s.

Yes, we have an excuse: Our huge IT legacy creates lots of requirements that these small, cheap, innovative gadgets can't fulfill. To support them, we'd have to rethink our approaches to security, usability, storage, networking — practically everything in IT.

But our excuse is no longer enough. It's time to start that rethinking.

We're now at the point where the most innovative technology for users really is being created in the nonbusiness space. Corporate IT has become the prisoner of legacy technology, and the result isn't just stodginess — we're missing out on innovation that could make our users more productive, more effective and more successful.

When that happens, we're failing at our job.

If you want a rallying cry for the new year, here's one: None of our users should have to make do with tech that's second-rate compared with what an impoverished third-world child gets.

If you don't like that rallying cry, just remember this: Our users already know about the XO, the Eee and the iPhone. They know what's possible, and what we're not delivering.

And, right or not, they'll know who to blame. ■

Frank Hayes *is* Computerworld*'s senior news columnist. Contact him at frank_hayes@computerworld.com.*

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